UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
WU-16J

VIA FACSIMILE AND MAIL

March 29, 1999

Andrew Hogarth, Assistant Chief
Environmental Response Division
Michigan Department of Environmental Quality
P.O. Box 30426
Lansing, Michigan 48909

Re: Detroit Coke Site Investigation Technical Memorandum, March 24, 1999

Dear Mr. Hogarth:

We have received the above-referenced Detroit Coke Site Investigation Technical Memorandum on March 25, 1999. Enclosed with this letter are the initial comments from the United States Environmental Protection Agency (EPA). We were told that the EPA's comments have to be provided to the Michigan Department of Environmental Quality (MDEQ) by Monday, March 29, 1999. Based on the short time frame we were given to review the memorandum, the comments enclosed represent an initial review. EPA reserves the right to comment more fully on the report in the future.

Thank you for giving us the opportunity to review the memorandum. If you have any questions regarding these comments, do not hesitate to contact either myself at (312) 886-1498 or Greg Rudloff at (312) 886-0455.

Sincerely yours,

Allen Melcer, Geologist
Underground Injection Control Branch

Enclosure

cc: Steven Murawski, USEPA Office of Regional Counsel
Greg Rudloff, USEPA Waste Management Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JAN 09 1998

REPLY TO THE ATTENTION OF:
WU-16J

Paul K. Choinski, Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: Extension for Notice of Deficiency Response

Dear Mr. Choinski:

I have received a letter dated December 23, 1997, from your consultant, George Lynn of ERM-North Central, Inc., requesting a 30 day extension, to February 12, 1998, for replying to the Environmental Protection Agency's (EPA) second Notice of Deficiency (NOD) regarding Detroit Coke's RCRA Facility Investigation (RFI) workplan. The reason given for the extension request is to allow you to develop fully revised workplan.

You request for an extension is granted. The new due date for Detroit Coke's revised RFI Workplan is February 12, 1998.

If you have any questions, please contact me at (312) 886-1498 or Greg Rudloff at (312) 886-0455.

Sincerely yours,

Allen Melcer, Geologist
Underground Injection Control Branch

cc: Nicole Cantello, U.S. EPA, Office of Regional Counsel
Greg Rudloff, U.S. EPA, Waste, Pesticides, and Toxics Division

CITY OF DETROIT
DEPARTMENT OF ENVIRONMENTAL AFFAIRS

660 WOODWARD
1650 FIRST NATIONAL BUILDING
DETROIT, MICHIGAN 48226
PHONE 313•237•3090
FAX 313•224•1547

November 20, 1997

Allen Melcer
Geologist
Underground Injection Control Branch
USEPA Region 5
77 West Jackson Blvd
Chicago, IL 60604-3590

Re: **Detroit Coke's November 4, 1997 Response to Notice of Deficiency Regarding Detroit Coke Corporation's April 1996 RCRA Facility Investigation (RFI) Workplan**

Dear Mr. Melcer:

We have met with representatives of Detroit Coke and Allied Signal and have reviewed the above-referenced response to USEPA's notice of deficiency. We have the following comments.

1. **Michigan's Brownfields Initiatives**

Michigan has developed a number of programs to enhance brownfields redevelopment. The City of Detroit has been an active participant in both formulating the state's policy and in implementing initiatives at the local level.

Michigan's brownfields program consists of several interrelated components which should not and cannot be viewed in isolation. These components include: 1) comprehensive reform of the liability scheme under state law to foster reuse of contaminated properties; 2) change of cleanup criteria to a risk-based approach that takes into account land use; 3) introduction of affirmative duties and obligations on both innocent owners and "responsible" parties; 4) development of legislation for tax incentives to allow non-liable developers to finance response activities; 5) intergovernmental cooperation, such as through the City of Detroit's REUS Team, to address specific projects from

response activity through reuse; and 6) coordination with USEPA's CERCLA program through a Memorandum of Agreement and information and resource sharing.

The purpose of these initiatives is to provide *non-liable* parties with legal protection, resources and governmental assistance to redevelop brownfields. It also provides a means by which a liable party could transfer its contaminated property to a non-liable person -- provided the liable party has otherwise complied with Part 201.

For example, a *non-liable* party may perform a "baseline environmental assessment" (BEA) within forty five days of purchase or occupancy of a contaminated property. This assessment provides a basis for distinguishing past contamination from contamination that could be attributable to the reuse. If done properly, the BEA exempts the new owner from liability for past contamination.

State law also imposes on any current and subsequent owner of contaminated property certain "due care" obligations with respect to all known contamination left in place. These duties include an obligation not to exacerbate existing conditions and to protect the public from unreasonable exposure to the contaminants left behind.

Under Michigan's brownfields initiatives, a redeveloper (and the supporting financial institutions) will require adequate information about site conditions to distinguish existing contamination from that which could be associated with the new use. A developer will also need adequate information about site conditions so that he or she can plan a project that will not exacerbate existing conditions and that will meet ongoing due care obligations to persons using the property.

A true "brownfields plan" for Detroit Coke's property would address these requirements, obligations and needs. For the reasons discussed in detail below, Detroit Coke's proposal does not come close to being a true "brownfields" plan.

2. **Comments On Detroit Coke's Proposal**

The Detroit Coke proposal does not comport with the City or State's integrated brownfields initiatives. The proposal includes no discussion of the potential planned reuse of the property and no provision for an investigation designed and implemented in a manner that would foster such reuse. The proposal does not address what information or financial mechanisms Detroit Coke will use or offer to a redeveloper to effectuate a new use. In fact, it appears to us that Detroit Coke's "brownfields" proposal consists entirely of paring down its investigation, using the more lenient Part 201 criteria to accomplish a closure, and leaving the property fallow and unusable -- subject to monitoring and deed restrictions. This is not a course of action that the City will endorse.

A proposal such as Detroit Coke's -- which would leave behind significant amounts of known contamination and which would not adequately establish the condition of the property -- will likely impose an unacceptable "due care" burden on a future developer. It will also make it more difficult to perform a baseline environmental assessment. Some aspects of the plan will actually have a regressive effect on the property over its current condition from the standpoint of reuse. We believe these impediments will effectively retard or even prohibit development if the Detroit Coke proposal is implemented as proposed.

A. Comments on Scope of Work (SOW)

1. **Coal Tar:** Detroit Coke proposes to remove up to two feet of residual coal tar from the Tar Tank Area for "recycling" at Tonawanda Coke in New York. (SOW, item 1). As a general matter, leaving *any* coal tar in the ground at shallow depths could severely limit the use of the property in proximity to the product. If some product is to be left in the ground, there must be enough investigation done to assure that the residual is compatible with the anticipated reuse and does not present an ongoing threat to the rivers or other local resources. Also, areas where product is proposed to be left in the ground should be extremely limited relative to the overall developable area and must be strictly (both vertically and horizontally) delineated and possibly surveyed, as required by Part 201.

The SOW does not identify where tar will be taken that is

removed from the three existing above ground tanks. (SOW, item 2). This tar should be removed to an approved location.

The City does not have any information regarding the capability of Tonawanda Coke to accept coal tar from Detroit Coke for recycling. We would expect USEPA to obtain assurance that movement of this material to Tonowanda Coke is legal and appropriate and is accomplished in a proper and safe manner. We would also expect safeguards will be put in place to assure that the coal tar is in fact timely recycled and not merely stockpiled at that location. The City will not endorse any plan that would appear to simply shift this problem from Detroit to a sister city.

2. **Rail Lines:** Detroit Coke is proposing to "remove and visible rail lines still in place." (SOW, item 2). The City would like these lines to be identified to assure that the lines proposed for removal are not useful for reuse.

3. **Consolidation of Materials:** Detroit Coke is proposing to consolidate visually-impacted tar and coke processing materials from the By-Products SMU in the excavated Tar Tank SMU. Since the standard for removal is visual, there will be no assurance under this procedure that actionable levels of contaminants do not remain in the By-Products area and that it could be re-used.

With regard to using the Tar Tank Area SMU as a permanent on-site disposal cell, it should be understood that while such a concept might be permissible under RCRA or Part 201, it is *not* an approach that favors or promotes reuse of the site. The City does not consider this proposal to be a sound "brownfields" approach -- at least in the absence of a specific development plan that can accommodate and allows for the presence of permanent subsurface disposal in the Tar Tank Area.

Also, as noted earlier, the vertical and horizontal dimensions of such an area must be strictly delineated and should be limited. In addition, the area should meet all specifications needed to protect the public health, safety and environment with respect to disposed material.

4. **Clay Fill:** Detroit Coke is proposing to backfill the excavated coal tar areas with material "stockpiled" at the site that is "clay-rich." (SOW, item 4). The City would expect more analysis of this "cover" material and a further explanation of what Detroit Coke considers to be "clay rich." In addition to its capability to serve as adequate cover, the material should be screened for contaminants. If the material itself is contaminated it may further restrict future productive use of the Detroit Coke property.

As discussed below, the City is also concerned that this "stockpile" may in fact be a solid waste taken from an offsite location. Given that piles of demolition debris and other solid wastes are "stockpiled" on site, the characterization of this "clay-rich" stockpile should be viewed as suspect.

5. **Grade Property for Drainage:** Detroit Coke is proposing to grade the area using demolition debris stockpiled at the site to promote stormwater drainage and to deter infiltration. (SOW, item 5). This is completely unacceptable.

The City has had ample and unfortunate experience with sites where demolition debris has been abandoned or used for fill. Basically such sites become difficult or impossible to reuse unless the debris is first removed or re-engineered. The debris (even if not contaminated) is not suitable for holding new structures. Moreover, demolition debris will not "deter" infiltration -- and may have quite the opposite effect.

The City also finds it very disturbing that the demolition debris has been "stockpiled" at the site during removal of plant facilities. (SOW, item 5). Even if one could rely on the assurance that the debris was not dumped there from other projects, the debris should have been properly removed and disposed of years ago. In essence, Detroit Coke's proposal would reward them for illegally "stockpiling" solid waste by allowing them to permanently avoid disposal costs while at the same time permanently devaluing the option for reuse of the property. The property is not a licensed solid waste disposal area and it should not be treated as one.

Finally, "drainage" is a proper design factor but should be

considered in light of the destination of the run-off. As a contaminated site, run-off to surface water should be pursuant to a properly issued NPDES stormwater permit. The City has been told by Detroit Coke that run-off does not go to DWSD -- but if it does, that must also be pursuant to permit. If run-off is to be directed toward a deep well, then that should also be specified and controlled appropriately.

6. **Groundwater Monitoring:** An adequate program for monitoring groundwater is not objectionable to the City from an environmental standpoint (although it does not promote the possibility of reuse). The technical details should be carefully reviewed by regulatory authorities -- particularly in light of other aspects of the proposal which would leave contaminants in place. Monitoring wells should be designed in a way that will detect migration of thick, vicious liquid such as coal tar as well as dissolved fractions.

It should be noted, however, that monitoring in lieu of remediation poses additional problems to reuse. Future developers will be reluctant to assume the risk that their projects will be upset when the monitoring system detects actionable levels of contaminants. Also, the question of *who* will do the monitoring long-term, and what happens if it is not done, will also present potential exposure. If corrective action (if any is needed) is determined and implemented in advance, this would lessen the risk and enhance the prospects for redevelopment.

7. **Institutional Controls:** Detroit Coke correctly notes that some institutional controls would be needed for this site in order to remediate it under Part 201. In a brownfields development (which this is not) such controls would have to be consistent with the proposed development, acceptable to financial institutions, and consistent with zoning. Under Part 201, such controls would have to be consistent with zoning and possibly approved by MDEQ, depending on the type of criteria used for cleanup.

Given the absence of a specific redevelopment proposal, the City reserves comment for now on any institutional controls that may be used to accomplish remediation.

B. Comments On "Benefits of Redevelopment"

Detroit Coke offers that each of the steps in the SOW is "aimed at managing site contamination by mitigating the potential exposure pathways that could impact human health and the environment, and preparing the property for redevelopment." For the reasons discussed in detail above, the City does not concur. None of the elements of the SOW "prepare the property for redevelopment," nor do they appear to adequately address the other objectives.

Detroit Coke details its assertion by reviewing some aspects of its so-called Brownfields Redevelopment Plan. The overall problems with Detroit Coke's approach are discussed in connection with the SOW. In addition, the City has the following observations regarding the purported "benefits."

1. **Impacted Materials and Coal Tar Wastes**: It may be true (as Detroit Coke suggests) that fill material of unknown character was brought into the site. But it does not follow that leaving contaminants attributable to coke operations on site is inevitable (because it is allegedly indistinguishable) or that it somehow provides a net benefit. The problems for reuse created by leaving contaminants on-site without a cogent redevelopment plan are discussed earlier.

As far as we can tell, no attempt has been made or proposed to characterize the quality of the historic fill material. There is, therefore, no basis for the conclusion that contaminants (if any) in that fill are indistinguishable from those attributed to coke operations.

Nor should the reduction of or mitigation of exposure through on-site management be considered a unique benefit of a "brownfields" approach. Although appropriate on-site management can reduce exposures, this would be a minimum requirement of any Part 201 response action.

2. **Groundwater**: Groundwater is generally not used for production or consumption within the City of Detroit. It can, however, be a conduit for transmission of contaminants off-site and to protected resources, like the Detroit and Rouge

Rivers. Groundwater not in a productive geologic unit is also subject to state criteria to protect against direct contact and migration of volatilized vapors into indoor air.

Our understanding is that groundwater at the site can be expected to contain heavy liquids and lighter, volatile fractions from coal tar, such as benzene. If the property is to be reused, the pathways mentioned above might have to be addressed on a site-wide basis. While an appropriate perimeter monitoring proposal may help assure that migration is not occurring, it does nothing to establish interior site conditions. Redevelopment of the site without knowledge of those conditions would be very much in doubt.

3. **Class I Injection Wells**: Detroit Coke proposes that if the two on-site deep injection wells are approved for commercial waste, "they become a viable part of the redevelopment plan." The City disagrees.

As discussed earlier, there is no "redevelopment" plan for this site. There is, therefore, no place for the injection wells within that plan. In addition, the proposal to operate a commercial injection well at this location is extremely controversial. Nothing in the proposal for commercial operation would require remediation of areas on the site, and if approved, it will actually do nothing to improve conditions for reuse. In fact, given the depth of the controversy, developers may not want to have their businesses associated with or in proximity to the commercial injection well operation -- thus hampering overall redevelopment of the area.

C. Summary Comments

Overall, the plan proposed by Detroit Coke has little to do with the City or State's brownfields initiatives. Detroit Coke seems to be proposing limited removal of tar, capping residual material in place, restricting use and access to the site, and monitoring the groundwater -- all with a minimum amount of further investigation and delineation of contaminants. If possible, they would like to convert their existing deep wells to commercial use.

In essence Detroit Coke is requesting that USEPA "close" its site under the more permissive standards and criteria allowed under Part 201 in lieu of RCRA standards. This is ultimately a policy decision that must be made by USEPA. While Detroit Coke may label its proposal a "Brownfields Redevelopment Plan" it is, in fact, nothing of the sort. The cleanup criteria and procedure invoked by Detroit Coke is just one aspect of the State's brownfield's initiative and does not transform site response activities under Part 201 into a "brownfields plan."

While we support an expeditious clean-up of this property under Part 201 -- one which will allow a more expeditious re-use and redevelopment of the property than might be possible under RCRA -- we can not concur in or approve Detroit Coke's present proposal. We have indicated that we stand ready to assist Detroit Coke in marketing this site. We do not believe that this present proposal fosters that goal. Thank you for this opportunity to comment on Detroit Coke's proposal. If you have any further questions, please call.

Sincerely,

Sarah D. Lile
Director

SDL:fcs

cc: Andrew Hogarth, MDEQ
Mark Jones, MDEQ District Office
Joseph Vassallo, Planning and Development Department
Deborah Fisher, Planning and Development Department
Karen O'Donoghue, Detroit Economic Growth Corporation
Brian Morrow, Law Department
Avery K. Williams, Fink Zausmer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
WU-16J

Date: **December 22, 1997**

Subject: **Meeting Announcement - Detroit Coke Corporation Injection Well Site**

To: **City, County, State and Federal Officials**

The United States Environmental Protection Agency (USEPA) will be holding a question and answer session for city, county, state and federal government officials on the underground injection well permit applications and on the facility corrective action currently underway at the Detroit Coke Corporation site, located at 7819 West Jefferson Avenue, Detroit, Michigan.

The meeting will be held on January 8, 1998, from 1:30 to 3:30 p.m. in:

The Mayor's Conference Room,
Room 1126, City-County Building
2 Woodward Avenue
Detroit, Michigan

Detroit Coke is at the junction of the Detroit and Rouge Rivers in southwest Detroit, adjacent to Zug Island industrial complex. The company submitted an application to USEPA, Region 5, for renewal of its two underground injection control permits. The proposed permits are for two existing deep injection wells that would allow for the disposal of potentially hazardous contaminated waters as part of the corrective action cleanup of the site and for commercial disposal of liquid non-hazardous wastes. Detroit Coke is also in the process of carrying out a corrective action, as required by the Federal Resource Conservation and Recovery Act. Under the corrective action, the facility must submit and have approved a workplan for site cleanup.

The USEPA will also be holding a public information meeting on January 8, 1998, from 7:00 to 9:00 p.m. at the South Rademacher Recreation Center, 6501 South St., Detroit, Michigan. For more information, please contact Don de Blasio (deblasio.don@epamail.epa.gov), EPA Office of Public Affairs, at (312) 886-4360 or toll-free, (800) 621-8431.

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CH2MHILL

Celebrating 50 Years

November 4, 1997

Mr. Allen Melcer
U.S. EPA Region 5
Underground Injection Branch (WU-16J)
77 West Jackson Boulevard
Chicago, IL 60604-3590

Dear Allen:

Subject: Response to Notice of Deficiency Regarding Detroit Coke Corporation's April, 1996 RCRA Facility Investigation (RFI) Workplan

I am submitting this response to your Notice of Deficiency for the above-referenced RFI workplan on behalf of the Detroit Coke Corporation (DCC), a Detroit, Michigan company, and AlliedSignal Inc.(AlliedSignal), whose headquarters are in Morristown, New Jersey. CH2M HILL has been asked to respond to your comments to the RFI workplan, and present a Brownfields Redevelopment Plan for the Detroit Coke site at 7819 Jefferson Avenue in Detroit, Michigan.

This site, located less than three miles from downtown Detroit, is an excellent candidate for redevelopment because of its access to major transportation routes, proximity to the downtown area and neighboring industries, and overall size. Because DCC and AlliedSignal want to return the property to beneficial reuse, a redevelopment plan is presented in this letter which has different goals and objectives than the current RFI workplan. For this reason, alternative sampling, testing, and remediation activities are proposed for your review and approval, with the ultimate goal of preparing the property for redevelopment. Opportunities already exist for bringing new business to the site, so implementing a Brownfields Plan will be timely and beneficial.

The Brownfields Redevelopment Plan is presented below, followed by Attachment A which contains responses to each of your comments on the existing RFI workplan. The response to some of your comments would be the same whether the existing RFI workplan or the Brownfields Plan were implemented. However, the different scope of work in the proposed Brownfields Plan impacts other comments which are noted accordingly.

Brownfields Redevelopment Plan
Detroit Coke Site

Introduction

The Brownfields Program, initiated by U.S. EPA Director Carol Browner and originally developed by Region 5, provides strong incentives for property owners to return former industrial sites to beneficial reuse. Elements of the Brownfields Initiative that promotes these incentives include:

- Site cleanup for the sake of site cleanup is an inappropriate goal,
- The primary goal of site remediation should be managing contamination to protect the pathways through which harm to public health and the environment can occur, and
- Liability concerns should not be based on the presence of contamination, but on whether contamination is being properly managed.

U.S. EPA has further promoted this approach in proposed changes to RCRA Subpart S regulations. As specified in their Advance Notice of Proposed Rulemaking (ANPRM), EPA's objectives for the Subpart S Initiative are as follows:

- Create a consistent, holistic approach to cleanups,
- Establish protective, practical cleanup expectations,
- Shift more of the responsibility for cleanup to the regulated community,
- Focus on streamlining and reducing costs, and
- Enhance meaningful public participation.

The State of Michigan, through its Site Reclamation Program (Act 201), the Redevelopment of Urban Sites Action Team (REUS) located in Detroit, and recent changes in the Michigan Environmental Response Act, has supported the federal Brownfields program by implementing legislation and funding mechanisms that encourage property redevelopment. Industrial property that has remained idle or abandoned due to real or perceived environmental contamination can now be returned to beneficial reuse by considering risk-based corrective actions and the future use of the property in the redevelopment process.

As you are aware, a RCRA Release Assessment was performed to characterize environmental conditions at the Detroit Coke site, followed by preparation and submittal of the RFI workplan. Rather than continue through a protracted RCRA Facility Investigation and Corrective Measures Study (RFI/CMS), DCC and AlliedSignal propose the following Brownfields Redevelopment Plan for the property. This approach is consistent with the Brownfields and Subpart S Initiatives, and has numerous benefits over the conventional RCRA process. Above all, the primary goal of the plan is to prepare the site for redevelopment as a viable and productive part of the Detroit community.

Scope of Work

1. Excavate and remove residual coal tar in the Tar Tank Area SWMUs for recycling at Tonawanda Coke's New York tar treatment plant. Material will be removed from the Tar Tank Area (SWMU 11), the Trench Area (SWMU 12), and the Tar Pump House (SWMU 13) until the underlying fill dirt is encountered, or until a depth of two feet of excavation is achieved.

2. Remove tar from the three existing above ground tanks at the site. When completed, the tanks will be removed and scrapped for steel recycling. Any visible rail lines still in place at the site will also be removed for scrap steel. In addition, remaining buildings at the site will be demolished and resulting debris removed as necessary.

3. Place visually-impacted tar and coke processing materials from the By-Products Containment Area SWMUs in the excavated Tar Tank Area SWMUs. This serves the dual purpose of consolidating impacted material at the site, and returning the TAR Tank Area SWMUs to grade for drainage control.

4. Place and compact two feet of clay fill, currently stockpiled on site, over the Tar Tank Area SWMUs. This fill was brought to the property from a nearby construction site and has been tested to be a clay-rich material.

5. Grade the entire property, using demolition debris stockpiled at the site during removal of plant facilities and additional offsite clean fill as needed, to promote stormwater drainage and deter infiltration.

6. Upgrade and maintain the existing well network to monitor groundwater quality at the site. The upgrades include installing two wells along the downgradient edge of the property to complete a perimeter monitoring network, and two additional wells, one upgradient and one downgradient of the Tar Tank Area SWMUs, to evaluate the impact on groundwater from this specific area. The latter two wells will not be maintained as part of the monitoring network if groundwater impact is not detected.

All wells will be screened from the water table surface to the top of the first confining clay so that both petroleum hydrocarbons and coal tar residues can be monitored in the shallow water table unit. Geological and hydrological information will also be collected during well installation. In the event there is sufficient impact to groundwater quality detected at the property boundary to warrant remedial action, or groundwater cleanup is initiated for the Detroit metropolitan area, DCC and AlliedSignal will address groundwater conditions at the site. Perimeter monitoring will be performed for a period of time mutually agreed upon by DCC, AlliedSignal and U.S. EPA.

7. Develop institutional controls and deed restrictions that apply to the future use of the property. These include elements such as perimeter fencing, access gates, building restrictions for impacted areas, restrictive covenants, and health and safety protocols for construction employees that may work at the site.

8. Perform post-grading risk assessment and sampling if deemed necessary. Implementation is dependent on actual site conditions encountered during the restoration process, at which time a decision can be made as to whether either activity adds value to the potential redevelopment of the site.

Benefits of Redevelopment

Each of these action steps is aimed at managing site contamination by mitigating the potential exposure pathways that could impact human health and the

environment, and preparing the property for redevelopment. The future use of the property will also take these pathways into account, and has the potential to further limit exposure through the construction of parking lots, building foundations, and other covered areas. The Brownfields Plan addresses the two issues of concern expressed in the current RFI workplan: potential direct human contact exposure to soil, and the potential for uncontrolled exposure in groundwater at the perimeter of the site. A summary of the benefits derived from the Brownfields Redevelopment Plan are listed below.

Impacted Materials and Coal Tar Wastes

It is a known fact that this part of the Detroit and Rouge River waterfront was landfilled during the early part of the century to accomodate industrial growth in the Detroit area. Fill material of unknown origin and character was brought to Zug Island and the adjacent properties, some of which may have been other industries' wastes and byproducts. Any attempt to separate formerly impacted fill from wastes generated by onsite operations would be a difficult if not impossible task, and would conceivably require excavation of the entire Zug Island area to a depth of several feet below groundwater to achieve uniform cleanup.

Realizing the impracticability of this task, removal of stored tar wastes for recycling eliminates potential source material from the site, and consolidation followed by capping further reduces the potential for exposure and groundwater impact. This approach specifically addresses exposure pathways to protect human health and the environment, and promotes contamination management onsite rather than transferring liability to an offsite location. An additional benefit is minimizing the disturbance of onsite materials that are old and degraded, which also reduces adverse affects to workers on the property and neighboring businesses.

Groundwater

Groundwater management is a key to any successful redevelopment program. At the Detroit Coke site, groundwater is as shallow as two feet below surface, and slopes in an easterly direction towards the Detroit and Rouge Rivers. Fill material at the site extends to an average depth of ten feet below surface, and is in turn underlain across most of the site by a thick layer (40 feet) of natural clay. It is

unlikely that shallow groundwater contained in the fill material will ever be developed into a resource. Based on these facts, groundwater at the site is best managed using a perimeter monitoring approach.

Impacted groundwater identified through previous investigation activities has been limited to a single occurrence of creosote-like product in an apparent upgradient well, and benzene at trace levels in the northern part of the site. Upgrading the existing well network by the addition of selected wells near the Tar Tank SWMUs and along the downgradient perimeter will provide adequate monitoring of both these occurrences.

Coal tar residues are persistent and relatively immobile in the subsurface. Monitoring their presence, and especially the potential migration from an offsite source, is a proven and accepted method of groundwater management for liquid tars, especially considering their difficulty for recovery using conventional technologies. The attenuation of benzene and other light fractions has been successfully demonstrated insitu through intrinsic bioremediation. The recommended monitoring well network at the Detroit Coke site, as shown on Figure 1, is well-suited to monitor and track the biodegradation of benzene across the property.

Proposed wells in the RFI workplan which are designed to monitor a deeper confined sand unit are not considered necessary at the time. Only one round of sampling and testing has been completed for selected wells screened in the shallow water table unit, resulting in the limited occurrences of chemical constituents mentioned above. In addition, the potential exists to breach the confining integrity of the clay layer that separates the water table unit from the deeper sand unit by drilling through it, and to assess the Detroit and Rouge River drainage basins for constituents migrating from offsite sources which is beyond the scope of this project. For these reasons, a period of sampling and testing of the proposed perimeter monitoring well network in the shallow water table zone is recommended before implementing a deep well installation and monitoring program.

Class I Injection Wells

Two Class I injection wells are located near the western boundary of the property. DCC has used these wells for the injection of waste byproducts from the

coking industry, and recently submitted a request to EPA for repermitting these wells. Although the future of injection is not known at this time, the wells do not influence the decision to pursue a Brownfields Redevelopment Plan at the site.

If the wells are eventually permitted for injection of commercial waste, they become a viable part of the redevelopment plan. The strip of land adjacent to the western property boundary where the wells are located can be improved for access and egress, and unloading and cleanup operations. In the event the wells are not commercialized, they can be formally closed and abandoned and the surrounding property incorporated into the balance of the site for redevelopment. In short, the wells can become an integral part of redevelopment for the site, or removed from service and the area used for other redevelopment options.

Summary

Along with the obvious benefits cited above , the Brownfields Redevelopment Plan is readily implemented and can be completed during a single field season. This is in contrast to the more lengthy process associated with a traditional RFI/CMS, in which case the site could remain in its present condition for several more years while testing, evaluation of alternatives, and negotiations of future actions are carried out. The goal of the Brownfields Initiative as described by Carol Browner is not strictly site cleanup, but more appropriately, property redevelopment.

From a beneficial reuse standpoint, there are several options under consideration for the Detroit Coke site. These include barge material storage, truck-transfer warehousing, commercial and private boat docking, expansion of other businesses in the vicinity, and area parking. DCC and AlliedSignal are considering these and other uses that will promote revitalization in the city, and are interested in working with the Detroit REUS Action Team to find a buyer for the property.

To pursue the Brownfield Redevelopment Plan presented here, the RFI workplan will be rewritten to incorporate the scope of work presented above. This will minimize the amount of changes necessary to revise the current RFI workplan and take advantage of the procedures and plans already reviewed and commented on by EPA. The main differences between the RFI workplan and the Brownfields Plan are the focus on perimeter monitoring and the elimination of further soils

analysis, and the inclusion of remediation activities that prepare the site for redevelopment.

The responses to your comments in the Notice of Deficiency are provided in Attachment 1. As mentioned previously, many of the responses are the same whether the existing RFI workplan or the Brownfields Plan is pursued, while others specifically benefit from Brownfields redevelopment. We would be glad to meet and review the Brownfields Plan with you and establish a path forward. At that time we could also discuss whether to stay in the RCRA program, or move the project into Michigan's Site Reclamation Program (Act 201) and apply for assistance from the REUS Action Team. DCC and AlliedSignal are committed to completing the Brownfield Plan and return the Detroit Coke site to beneficial reuse. Your assistance in this process will be a valuable asset for supporting the economic growth of the City of Detroit. Please call me at 314-421-0313, extension 233 if you have questions or need further information.

Sincerely,
CH2M HILL

C. George Lynn
Vice President

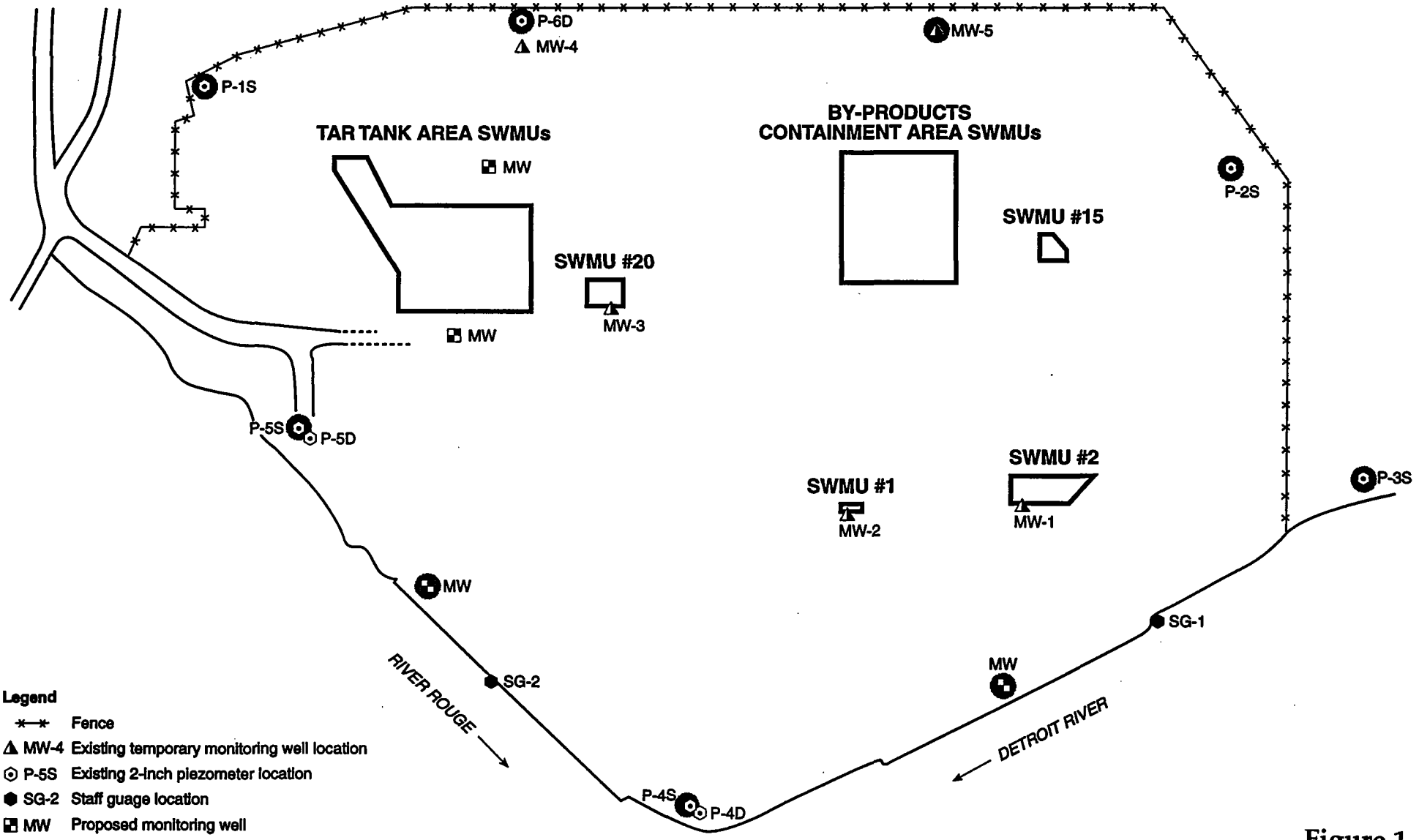


Figure 1

Brownfield Redevelopment Plan
Perimeter Groundwater Monitoring Network
Detroit Coke Corporation
Detroit, Michigan

CH2MHILL

E137784.00.ZZ Per Grdwtr Mon Mat 5-1-97 lmh/mms

ATTACHMENT I
RESPONSES TO U.S. EPA COMMENTS
RCRA FACILITY INVESTIGATION WORK PLAN
DETROIT COKE CORPORATION
DETROIT, MICHIGAN
MID 099 114 704

PROJECT MANAGEMENT PLAN

1.1 Purpose and Scope

1. Justification must be provided for eliminating other possible exposure pathways such as fugitive dust emissions and release to surface waters by runoff.

Response - Other possible exposure pathways are eliminated through the combined activities of the Brownfields Plan. These activities include the removal of tar from the above ground tanks, consolidation of soils in the Tar Tank Area, demolition of remaining structures, and covering the site with fill and grading to control runoff. All of these activities will serve to mitigate exposure pathways such as fugitive dust emissions and release to surface waters, both of which will be further mitigated by redevelopment of the site (building foundations, concrete and asphalt paving, landscaping, etc.)

2.3 FUTURE USE OF THE SITE

2. Detroit Coke should obtain verification from the city of Detroit that there are no potential changes for zoning being considered for the immediate area.

Response - It is not currently known if there are potential zoning changes under consideration by the City of Detroit for the area immediately surrounding the Detroit Coke Site. A task will be incorporated into the revised RFI workplan to cover verifying the status of zoning and identifying any potential changes.

4.1 PERSONNEL & PROJECT MANAGEMENT

3. Allen Melcer should be added as a U.S. EPA RFI Project Coordinator.

Response - Allen Melcer will be added as the U.S. EPA Project Coordinator in the revised RFI workplan.

4.2 Technical Approach

4. If sampling indicates that ground water has been impacted, additional perimeter monitoring wells may be required.

Response - Perimeter monitoring of ground water is one of the key elements of the Brownfields Redevelopment Plan. A perimeter network of wells have been proposed

for the shallow water table unit, and should provide adequate coverage of the site both upgradient and downgradient. In the event ground water is found to impacted above levels of concern, additional wells will be recommended for installation at that time.

4.3.1 SWMU-Specific Sampling and Analysis

5. Wells into the lower aquifer should be constructed so as to prevent them from becoming potential migration pathways between the aquifers.

Response - This is a shared concern as stated in the Brownfields Plan. Rather than implement a deep aquifer well installation program at this time, it is recommended that the shallow water table perimeter monitoring system be completed and tested for a period of time to determine if deeper testing should be performed.

6. Ground water samples should be taken in the granular backfill of each of the outfalls near their discharge to the Detroit or Rouge Rivers. The granular backfill for these pipes may act as a conduit for potentially contaminated ground water.

Response - The Brownfields Plan will take into account the current and future use of the outfall pipes. By bringing the site to grade and covering it with clean fill, the pipes may no longer receive surface or ground water runoff, and could potentially be taken out of service. Likewise, subsequent construction and paving activities could further limit their use. For these reasons, sampling and testing of the granular backfill is not considered necessary at this time, but will be kept as an option depending on the ultimate fate of the outfalls.

4.3.2 Background Sample Collection and Analysis

7. Recommendation 3 from the RFI Release Assessment Final Report Should be included to further investigate upgradient ground water quality in the area of P-6D-95.

Response - P-6D-95 will be included in the perimeter monitoring well network to further evaluate upgradient groundwater quality.

QUALITY ASSURANCE PROJECT PLAN

1.1.1 Overall Project Objectives

8. It is premature to eliminate other possible exposure pathways such as fugitive dust emissions and release to surface waters by runoff.

Response - Other possible exposure pathways are eliminated through the combined activities of the Brownfields Plan. These activities include the removal of tar from the above ground tanks, consolidation of soils in the Tar Tank Area, demolition of remaining structures, and covering the site with fill and grading to control runoff. All of these activities will serve to mitigate exposure pathways such as fugitive dust emissions and release to surface waters, both of which will be further mitigated by redevelopment of the site (building foundations, concrete and asphalt paving, landscaping, etc.)

1.4.1 Specific Objectives and Associated Tasks

9. The criteria that will be used to add parameters to the Site Target List should be described.

Response - The criteria that will be used can be described in the revised QAPP. However, the Brownfields Plan does not involve soil sampling and analysis, so there may be no need to include these criteria.

10. Justification must be provided that the exposure assumptions that are used in calculating the Act 307 Type C Generic Industrial Cleanup Criteria for Groundwater and Soil are applicable to the Detroit Coke site.

Response - Justification will be included in the revised QAPP.

11. It should be stated what criteria will be used to determine if the ground water is impacted (e.g. Type C Industrial Cleanup Criteria).

Response - Criteria will be presented in the revised QAPP.

12. It should be stated what criteria will be used to determine if the ground water poses a risk to the rivers (e.g.. Type C Industrial Cleanup Criteria Groundwater GSI Values).

Response - Criteria will be stated in the revised QAPP.

13. **Page 9 of 14:** The means of preserving VOCs samples in soil must be discussed. There are several ways to accomplish this. However, the procedure must be fully explained. If the preservation technique will impact the subsequent analytical strategy, then this should also be stated with an understanding as to

whether or not specific project objectives may or may not be ultimately fulfilled (i.e. acceptance criteria, etc...). Note that the low concentration VOCs in soil method relying on purge & trap, is no longer considered an acceptable analytical strategy by the U.S. EPA as it has been deleted from SW-846, as of June 13, 1997.

Response - The means of preserving the VOCs in soil will be provided in the revised QAPP. The analytical approach will be reviewed and corrected as necessary to reflect any changes resulting from the preservation of soil samples. However, the Brownfields Plan does not involve soil sampling and analysis, so there may be no need to include the preservation technique.

1.4.3 Data Quality Objectives

14. Detroit Coke should add details concerning which levels of QC (i.e. QC sample types and procedures) will NOT be performed in the case of "expedited data". It is generally understood that the "confirmation data" to be provided for the final target parameter list will consist of a CLP-like data deliverable package.

Response - This information will be included in the revised QAPP. Confirmation data will include a CLP-like QA/QC deliverable package.

2.2 Management Responsibilities

15. Allen Melcar should be added as a U.S. EPA RFI Project Coordinator.

Response - Allen Melcer will be added as the U.S. EPA Project Coordinator in the revised RFI workplan.

2.4 Laboratory Responsibilities

16. The location of the laboratory, including the mailing address, should be stated in this section.

Response - The full address of the laboratory will be included in this section in the revised RFI workplan.

3.3.3 Laboratory Completeness Objectives

17. Rephrase the first sentence to read, "Lab completeness is a measure of the amount of valid measurements obtained from all the measurements planned for the project."

Response - This sentence will be rephrased as noted.

4.2.2.1 Equipment Rinse Blank Collection, and 4.2.2.2 Field Duplicative Collection

18. What is the anticipated source of water to be used for the final rinse? (How

"clean" will it be?) Note that the frequencies cited for the rinse blanks and field duplicate samples applies to each parameter group. This information should be inserted into these respective sections.

Response - For organic constituents, organic free reagent water, or HPLC grade water will be used. For inorganic constituents, distilled/deionized water will be used. The frequency of QA/QC samples will be included in the revised QAPP.

4.2..2.4 Trip Blank Preparation

19. For organic constituents, organic free reagent water, or HPLC grade water should be used.

Response - The HPLC grade water will be used for the trip blanks. This information will be included in the revised QAPP.

5.1.3 Transfer of Custody and Shipment Procedures

20. Will co-located samples be collected? This procedure should be decided in advance, and if this will be the case, the procedure for co-locating samples should be provided.

Response - Co-located samples will be collected upon request of the MDEQ or USEPA. The procedure will be added to the revised QAPP.

5.3 Final Evidence Files

21. What will the final evidence file specifically be comprised of? What is the retention period for the evidence file? It should be stated that these files should be offered to the U.S. EPA prior to disposal.

Response - Information regarding the final evidence files including content and retention period will be included in the revised QAPP. The section will also be revised to incorporate the comment statement.

7.2.2 List of Associated QC Samples

22. Some of the constituents which appear on the facility target list such as acetonitrile and acrylonitrile are poor purging, relatively toxic compounds. Unless the matrix spike solution is fortified with such compounds as a further demonstration of method accuracy, "non-detect" data may not be accepted as indication of the "absence" of such compounds.

Response - If it cannot be demonstrated that the "facility target list compounds" are being analyzed in an accurate and precise manner, the analytical approach will be reviewed and changed as necessary. An example of a potential change is to modify the matrix spike spiking solution to include the poor purging compounds. Changes to the analytical SOPs will be provided in the revised QAPP.

9.2.2 Procedures Used to Validate Lab Data

23. Referring to the final paragraph in this section, it should be stated that decisions to repeat sample collection will not take place without the advisement and approval of the U.S. EPA project coordinator.

Response - This statement will be added to Section 9.2.2 in the revised QAPP.

10.2.1.3 Internal Lab Audit Procedures

24. The results of the internal blind audit sampling should be reported to the U.S. EPA in addition to the reporting of investigational and other QC data.

Response - The laboratory will include this information and it will be provided to the USEPA.

13.2 Laboratory Corrective Action

25. There is a typographical error in the 4th line of Page 4 of 5. The word "pertinent" should be replaced with "percent".

Response - The typographical error will be revised as noted.

TABLES

Table 1-1 Summary of Sampling and Analysis Program

26. The intended depth of sampling has not been indicated in this table. The term "as amended" which appears in some places under the column heading, "laboratory analysis" should be defined. There are several SOPs contained in Appendix A which bear no apparent relation to this project, (such as the SOPs for analysis of cyanide). Why were these SOPs included in the QAPP?

The term will be defined in the revised QAPP. SOPs that do not apply will be deleted from the revised QAPP.

Table 6-1 Instrument Calibration and VOCs SOP in Appendix A

27.a. The low concentration method for soils may not be applicable if samples are preserved in methanol. There must be some attention paid to detail in the matter of how sample preservation may affect the analytical procedure. If the preservation technique will necessitate a revised analytical procedure then that procedure and all corresponding DQOs must be defined. (See sections 5.5, 7.2.2 and 12.2 of the VOCs SOP.)

Response - The analytical reporting limits will be compared to the critical values. Analytical procedures that best meet the project's critical values and DQOs will be selected. These changes, if any, will be reflected in the revised QAPP. However, the

Brownfields Plan does not include soil sampling and analysis, so these changes may not be needed.

b. In Table 6-1, note that there is no provision apparent in the VOCs SOP for an initial calibration verification sample. Is it still intended to analyze such a sample with the implied acceptance criteria?

Response - If an initial calibration verification standard is not required by the referenced analytical procedure, this requirement will be added to the analytical SOP. The revised QAPP will provide all changes to the analytical SOPs.

c. Will TICs be requested for this analysis? (See section 16.4 of the VOCs SOP.)

Response - The targeted analytical parameters are well established for this site. TICs will provide no new information. TICs will not be added as a requirement for these analyses.

<u>Table 6.1, page 2, and the SVOCs SOP</u>

28.a. Referring to the fourth column heading, the % RSD for each non CCC of interest must be less than or equal to 40%, as stated in the SOP. Also, there is a typo in the reference to N-notroso-n-dipropylamine. The minimum RF for all non SPCCs should be greater than or equal to .01, as stated in the SOP.

Response - These items will be corrected in the revised QAPP.

b. Referring to the 6th and 7th columns of this table, note that the SVOC SOP apparently does not call for an initial calibration verification sample. Is it still intended to include this sample?

Response - See Response to Comment 27 a.

c. It should be stated in the final column of this table for SVOCs that if the continuing calibration verification result for non CCCs of interest is greater than plus or minus 40%, corrective action must be taken.

Response - Corrective action will discussed in the revised QAPP. The analytical SOPs will reference the QAPP for corrective action requirements and procedures

<u>Table 7-1 Analytical Methods and Detection Limits</u>

29. For the metals in soil analysis, the laboratory should adhere to EPA Regional guidance concerning proper sample preparation for metals determination. This guidance is enclosed with this letter.

Response - The guidance will be followed. Documentation will be provided in the revised QAPP.

Table 7-2 Sample containers, Preservatives and Holding Times

30. The allowable holding time until sample extraction for SVOCs should be added to this table.

Response - The information will be included in Table 7-2 of the revised QAPP.

Table 7-3 Sample Containers, Preservatives and Holding Times

31. Please note that among other compounds, relatively toxic acetonitrile and acrylonitrile will not purge efficiently and most likely will be undetected unless present in high concentrations. The relevant State of Michigan action limits have not been included in the QAPP, but should ordinarily be indicated in this table. Apparently, the compounds, 2-chloro-1, 3-butadiene and trans-1, 4-dichloro-2-butene were not included in the proposed 8260 founded SOP. Standards for initial and continuing calibration should be included in the analytical procedure. Criteria for quantitation should be incorporated into the QAPP. Also, these compounds should be assigned to an internal standard. It is apparent that both SOP standards 1A and 1B will be utilized in order to address each of the compounds included in Table 7-3.

Response - The SOP will be corrected to address these concerns. The modified SOP will be supplied with the revised QAPP.

32. The compound, diphenylamine, was apparently not include in the SVOC SOP. Standards allowing for its initial and continuing calibration as well as criteria for quantitation should be incorporated into this QAPP. Although 3 and 4 methylphenol are indicated as separate parameters in this table, note that they will be reported as a sum. The QAPP table should be modified accordingly.

Response - The revised QAPP will be modified to include this information.

Table 8-1 Method Specific Data Quality Objectives Matrix Spike and Duplicate Control Limit

33. With reference to section 11.5 of the SVOC SOP, it should be adequately clarified that the matrix spiking compounds will spiked into the sample matrix, not the sample extract.

Response - The MS spiking solution shall be spiked into the matrix prior to sample extraction. This clarification will be provided in the revised SOP, which will be supplied with the revised QAPP.

Table 8-2 Method Specific Data Quality Objectives Surrogate Compound Percent Recovery Control Limits.

34. Surrogate compounds should be spiked into the sample matrices. (See section 11.4 of the SVOCs SOP.

Response - The surrogate spiking solution(s) shall be spiked into the matrix prior to sample extraction. This clarification will be provided in the revised SOP, which will be supplied with the revised QAPP.

APPENDIX B - FIELD SAMPLING SOPs

HG-7, Version I Monitoring Well Purge and Sampling With a Bailer

35. It should be specified that the volume of the filter pack should be included when calculating the volume of standing water in the well.

Response - The volume change calculation will be noted in the revised QAPP.

36. The order of sample collection should be specified as it is in Procedure 8. In the Field SOP for Split-Spoon Sampling.

Response - This section will be revised to include this information.

HG-3, Version I Permanent Wells Installed Through Hollow Stem Augers

37. The bentonite seal should be allowed to hydrate prior to tremie grouting the remaining annular space.

Response - This change will be documented in the revised QAPP.

38. The use of a side-discharging tremie pipe is recommended.

Response - This change will be documented in the revised QAPP.

5.0 Decontamination Procedures

39. Referring to the first bullet, bailers are not recommended for collecting VOC samples.

Response - A peristaltic pump will be used for collection of VOC samples.

6.2.1 Sample Frequency and Selection of Samples for Laboratory Analysis

40. A number of questions should be addressed. How will soil samples be preserved? Which samples and parameter groups shall be taken first, and what is the order of sampling until the last sample is taken? Referring to the second paragraph, it seems as if the "completeness DQO" will only be 25% for soil samples, in contrast to what is stated in section 3 of the QAPP where it is indicated that a completeness greater than 90% will be achieved. Under what conditions will soil samples be selected for analysis (i.e. on the outcome of a positive "detect" based on the expedited sample, or a negative result, and at

which decision level for each respective parameter)? Which project objectives area associated with the selection?

Response - The answers to these questions will be included in the final QAPP as appropriate. However, the Brownfields Plan does not involve soil sampling and analysis, so answers to some or all of these questions may not be included in the final QAPP.

6.2.3 Surface Soil Sample Collection

41. To what depth will samples be taken? What criteria will define the sampling depth and depth interval? Referring to "Field Screening", under what circumstances will the lab fraction actually be analyzed? Note that the "expedited lab analysis" should count as "field screening" per a recent U.S. EPA memorandum.

Response - This information will be included in the revised QAPP as appropriate. However, the Brownfields Plan does not involve soil sampling and analysis, so this information may not be included in the revised QAPP.

6.3.2 Ground Water Sample Collection

42. Dissolved oxygen and turbidity should also be included as indicators of groundwater stabilization. Will both 3 well volumes and stabilization criteria be applied prior to allowing sample collection? Note that a 10% range between successive pH measurements is excessive and favors uncertainty with basic water samples relative to acid samples.

Response - The indicators will be included for groundwater stabilization. If required, both methods to determine stabilization will be completed. Your comment has been noted.

Field Sampling Plan Table 4-1 Sample Containers, Preservatives and Holding Times

43. The holding time until SVOC sample extraction should be indicated in this table.

Response - This information will be included in the revised FSP Table 4-1.

Appendix A TriMatrix Environmental Laboratory SOPs

44. Due to the extended time frame for USEPA review, the SOPs presented in this appendix may have been revised since the document was submitted. Please check with the laboratory to ensure that the SOPs are still current.

Response - Revised SOPs will be submitted to the USEPA if the previous ones are not current.

Appendix A, 8260 SOP Section 13.3.1.2

45. What is the prescribed corrective action?

Response - The corrective action procedures will be included in the revised SOP.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

10/1/97

REPLY TO THE ATTENTION OF:
WU-16J

Paul K. Choinski, Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: Extension for Notice of Deficiency Response

Dear Mr. Choinski:

I have received a letter dated September 23, 1997, from your consultant, George Lynn of CH2M Hill, requesting a 30 day extension, to November 4, 1997, for replying to the Environmental Protection Agency's (EPA) Notice of Deficiency (NOD) regarding Detroit Coke's RCRA Facility Investigation workplan. The reason given for the extension request is to allow you to incorporate a brownfields redevelopment approach to the site remediation.

As I discussed with your consultant, any brownfields approach to the site involves land use, zoning and planning concerns which are the province of the City of Detroit. In order for a brownfields proposal to be approved by the EPA, it must also be approved by the City of Detroit. To ensure that the brownfields proposal which you intend to submit to the EPA is acceptable, I am making approval of your extension request contingent on your meeting with the City of Detroit prior to November 4, 1997, in order to discuss your brownfields plans with the city. To arrange your meeting with the city, please contact:

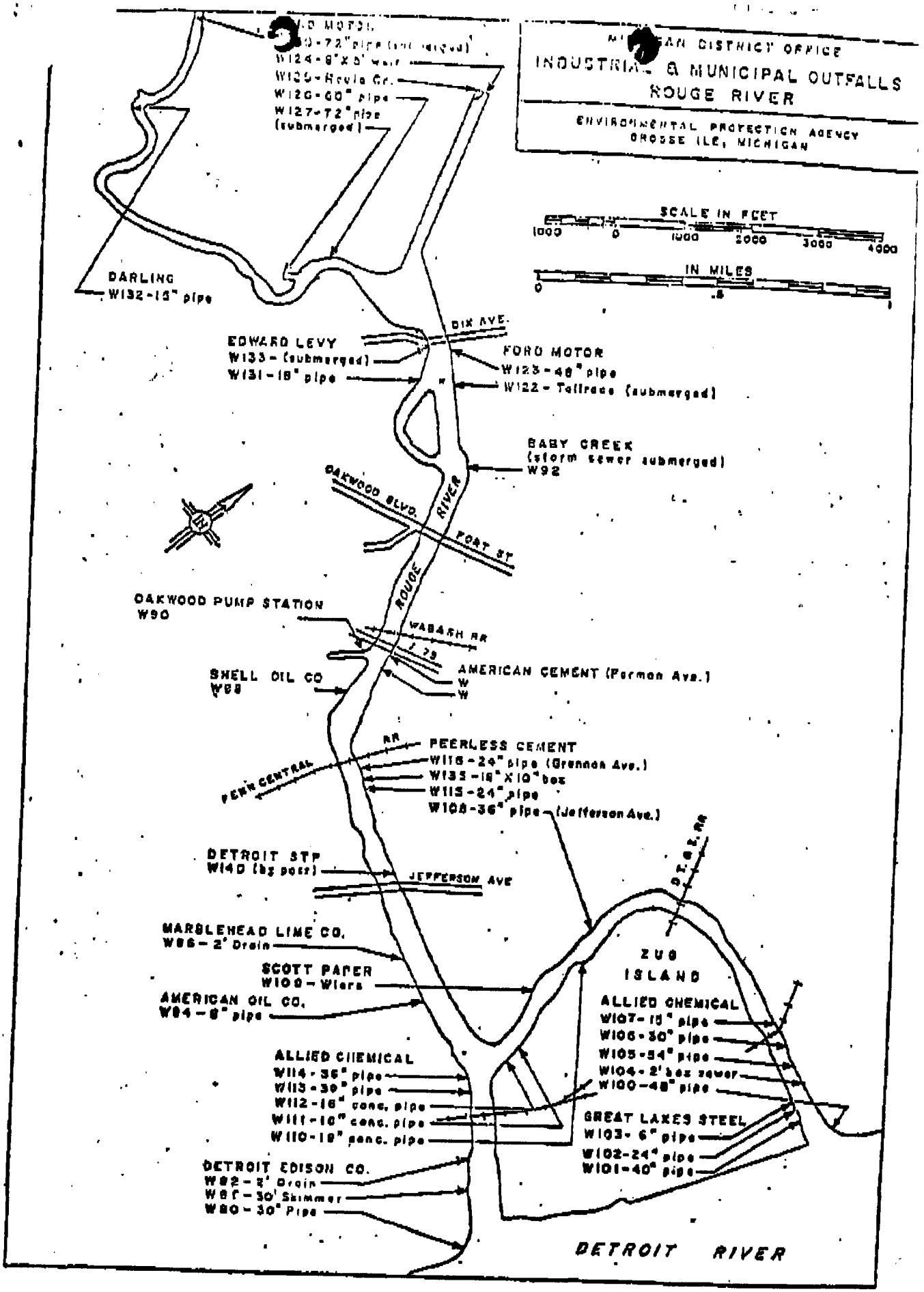
Ms. Sarah Lile, Director
Dept. Of Environmental Affairs
City of Detroit
1650 First National Building
Detroit, Michigan 48226
(313) 237-3090

If you have any questions, please contact me at (312) 886-1498 or Greg Rudloff at (312) 886-0455.

Sincerely yours,

Allen Melcer, Geologist
Underground Injection Control Branch

cc: Sarah D. Lile, Director, Dept. Of Environmental Affairs, City of Detroit

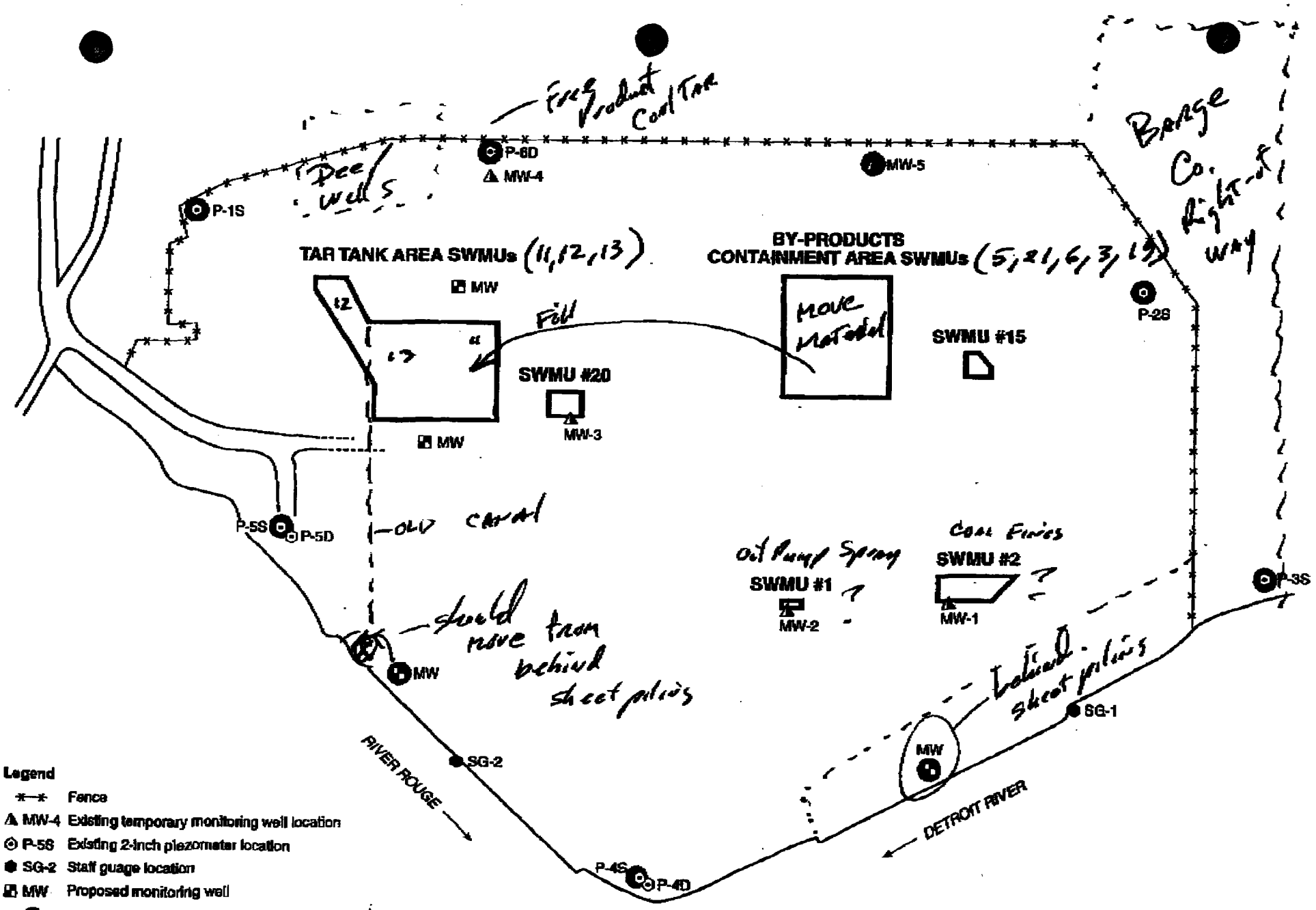

INDUSTRIAL & MUNICIPAL OUTFALLS
ROUGE RIVER
ENVIRONMENTAL PROTECTION AGENCY
GROSSE ILE, MICHIGAN
SCALE IN FEET
1000 0 1000 2000 3000 4000
IN MILES
0 .5 1
FORD MOTOR
W124 - 8"x5' weir
W125 - Rouge Cr.
W126 - 60" pipe
W127 - 72" pipe (submerged)
DARLING
W132 - 15" pipe
EDWARD LEVY
W133 - (submerged)
W131 - 18" pipe
DIX AVE.
FORD MOTOR
W123 - 48" pipe
W122 - Tailrace (submerged)
BABY CREEK
(storm sewer submerged)
W92
OAKWOOD BLVD.
ROUGE RIVER
FORT ST
OAKWOOD PUMP STATION
W90
WABASH RR
I 75
SHELL OIL CO
W88
AMERICAN CEMENT (Fermon Ave.)
W
W
PENN CENTRAL RR
PEERLESS CEMENT
W116 - 24" pipe (Brennan Ave.)
W135 - 18" X 10" box
W115 - 24" pipe
W108 - 36" pipe (Jefferson Ave.)
DETROIT STP
W140 (by pass)
JEFFERSON AVE
D.T.&I. RR
MARBLEHEAD LIME CO.
W86 - 2' Drain
SCOTT PAPER
W109 - Weirs
AMERICAN OIL CO.
W84 - 8" pipe
ZUG ISLAND
ALLIED CHEMICAL
W107 - 15" pipe
W106 - 30" pipe
W105 - 54" pipe
W104 - 2' box sewer
W100 - 48" pipe
ALLIED CHEMICAL
W114 - 36" pipe
W113 - 30" pipe
W112 - 16" conc. pipe
W111 - 16" conc. pipe
W110 - 18" conc. pipe
GREAT LAKES STEEL
W103 - 6" pipe
W102 - 24" pipe
W101 - 40" pipe
DETROIT EDISON CO.
W82 - 2' Drain
W81 - 30' Skimmer
W80 - 30" Pipe
DETROIT RIVER

October 28, 1997

	Name	Affiliation	Telephone
1	C. George Lynn	CH2M Hill	314-421-0900
2	Ross Powers	Detroit - DEA	313-237-3093
3	Brian Morrow	City of Detroit - Law Dept.	(313) 237-3048
4	Tim Metcalf	AlliedSignal	(973) 455-4107
5	Paul Chomski	Detroit Coke	(313) 842-6222
6	Janello Williams	CH2M Hill	313-567-4031
7	Karen D. O'Donoghue	DEQ	(313) 237-4021
8	Steven D. Lee	Env Atty	(313) 237-3092

DETROIT COKE SITE
DETROIT, MICHIGAN
BROWNFIELDS REDEVELOPMENT PLAN
PROPOSED SCOPE OF WORK SUMMARY

1. Excavate and remove residual tar for offsite recycling
2. Remove above ground tanks and rail lines for steel recycling
3. Demolish remaining buildings and remove debris
4. Consolidate soils onsite and place stockpiled clay fill over tank area
5. Grade the site to control drainage and deter infiltration
6. Upgrade existing well network and monitor groundwater
7. Develop institutional controls and deed restrictions
8. Perform risk assessment and sampling if necessary



Brownfield Redevelopment Plan
Perimeter Groundwater Monitoring Network

Detroit Coke Corporation
Detroit, Michigan

CH2MHILL

CH2M HILL
10 S. Broadway
Suite 450
St. Louis, MO
63102-1761
Tel 314.421.0900
Fax 314.421.3927

CH2MHILL

Celebrating 50 Years

November 4, 1997

Mr. Allen Melcer
U.S. EPA Region 5
Underground Injection Branch (WU-16J)
77 West Jackson Boulevard
Chicago, IL 60604-3590

Dear Allen:

Subject: Response to Notice of Deficiency Regarding Detroit Coke Corporation's April, 1996 RCRA Facility Investigation (RFI) Workplan

I am submitting this response to your Notice of Deficiency for the above-referenced RFI workplan on behalf of the Detroit Coke Corporation (DCC), a Detroit, Michigan company, and AlliedSignal Inc.(AlliedSignal), whose headquarters are in Morristown, New Jersey. CH2M HILL has been asked to respond to your comments to the RFI workplan, and present a Brownfields Redevelopment Plan for the Detroit Coke site at 7819 Jefferson Avenue in Detroit, Michigan.

This site, located less than three miles from downtown Detroit, is an excellent candidate for redevelopment because of its access to major transportation routes, proximity to the downtown area and neighboring industries, and overall size. Because DCC and AlliedSignal want to return the property to beneficial reuse, a redevelopment plan is presented in this letter which has different goals and objectives than the current RFI workplan. For this reason, alternative sampling, testing, and remediation activities are proposed for your review and approval, with the ultimate goal of preparing the property for redevelopment. Opportunities already exist for bringing new business to the site, so implementing a Brownfields Plan will be timely and beneficial.

The Brownfields Redevelopment Plan is presented below, followed by Attachment A which contains responses to each of your comments on the existing RFI workplan. The response to some of your comments would be the same whether the existing RFI workplan or the Brownfields Plan were implemented. However, the different scope of work in the proposed Brownfields Plan impacts other comments which are noted accordingly.

Brownfields Redevelopment Plan
Detroit Coke Site

Introduction

The Brownfields Program, initiated by U.S. EPA Director Carol Browner and originally developed by Region 5, provides strong incentives for property owners to return former industrial sites to beneficial reuse. Elements of the Brownfields Initiative that promotes these incentives include:

- Site cleanup for the sake of site cleanup is an inappropriate goal,
- The primary goal of site remediation should be managing contamination to protect the pathways through which harm to public health and the environment can occur, and
- Liability concerns should not be based on the presence of contamination, but on whether contamination is being properly managed.

U.S. EPA has further promoted this approach in proposed changes to RCRA Subpart S regulations. As specified in their Advance Notice of Proposed Rulemaking (ANPRM), EPA's objectives for the Subpart S Initiative are as follows:

- Create a consistent, holistic approach to cleanups,
- Establish protective, practical cleanup expectations,
- Shift more of the responsibility for cleanup to the regulated community,
- Focus on streamlining and reducing costs, and
- Enhance meaningful public participation.

The State of Michigan, through its Site Reclamation Program (Act 201), the Redevelopment of Urban Sites Action Team (REUS) located in Detroit, and recent changes in the Michigan Environmental Response Act, has supported the federal Brownfields program by implementing legislation and funding mechanisms that encourage property redevelopment. Industrial property that has remained idle or abandoned due to real or perceived environmental contamination can now be returned to beneficial reuse by considering risk-based corrective actions and the future use of the property in the redevelopment process.

As you are aware, a RCRA Release Assessment was performed to characterize environmental conditions at the Detroit Coke site, followed by preparation and submittal of the RFI workplan. Rather than continue through a protracted RCRA Facility Investigation and Corrective Measures Study (RFI/CMS), DCC and AlliedSignal propose the following Brownfields Redevelopment Plan for the property. This approach is consistent with the Brownfields and Subpart S Initiatives, and has numerous benefits over the conventional RCRA process. Above all, the primary goal of the plan is to prepare the site for redevelopment as a viable and productive part of the Detroit community.

Scope of Work

1. Excavate and remove residual coal tar in the Tar Tank Area SWMUs for recycling at Tonawanda Coke's New York tar treatment plant. Material will be removed from the Tar Tank Area (SWMU 11), the Trench Area (SWMU 12), and the Tar Pump House (SWMU 13) until the underlying fill dirt is encountered, or until a depth of two feet of excavation is achieved.

2. Remove tar from the three existing above ground tanks at the site. When completed, the tanks will be removed and scrapped for steel recycling. Any visible rail lines still in place at the site will also be removed for scrap steel. In addition, remaining buildings at the site will be demolished and resulting debris removed as necessary.

3. Place visually-impacted tar and coke processing materials from the By-Products Containment Area SWMUs in the excavated Tar Tank Area SWMUs. This serves the dual purpose of consolidating impacted material at the site, and returning the TAR Tank Area SWMUs to grade for drainage control.

4. Place and compact two feet of clay fill, currently stockpiled on site, over the Tar Tank Area SWMUs. This fill was brought to the property from a nearby construction site and has been tested to be a clay-rich material.

5. Grade the entire property, using demolition debris stockpiled at the site during removal of plant facilities and additional offsite clean fill as needed, to promote stormwater drainage and deter infiltration.

6. Upgrade and maintain the existing well network to monitor groundwater quality at the site. The upgrades include installing two wells along the downgradient edge of the property to complete a perimeter monitoring network, and two additional wells, one upgradient and one downgradient of the Tar Tank Area SWMUs, to evaluate the impact on groundwater from this specific area. The latter two wells will not be maintained as part of the monitoring network if groundwater impact is not detected.

All wells will be screened from the water table surface to the top of the first confining clay so that both petroleum hydrocarbons and coal tar residues can be monitored in the shallow water table unit. Geological and hydrological information will also be collected during well installation. In the event there is sufficient impact to groundwater quality detected at the property boundary to warrant remedial action, or groundwater cleanup is initiated for the Detroit metropolitan area, DCC and AlliedSignal will address groundwater conditions at the site. Perimeter monitoring will be performed for a period of time mutually agreed upon by DCC, AlliedSignal and U.S. EPA.

7. Develop institutional controls and deed restrictions that apply to the future use of the property. These include elements such as perimeter fencing, access gates, building restrictions for impacted areas, restrictive covenants, and health and safety protocols for construction employees that may work at the site.

8. Perform post-grading risk assessment and sampling if deemed necessary. Implementation is dependent on actual site conditions encountered during the restoration process, at which time a decision can be made as to whether either activity adds value to the potential redevelopment of the site.

Benefits of Redevelopment

Each of these action steps is aimed at managing site contamination by

mitigating the potential exposure pathways that could impact human health and the environment, and preparing the property for redevelopment. The future use of the property will also take these pathways into account, and has the potential to further limit exposure through the construction of parking lots, building foundations, and other covered areas. The Brownfields Plan addresses the two issues of concern expressed in the current RFI workplan: potential direct human contact exposure to soil, and the potential for uncontrolled exposure in groundwater at the perimeter of the site. A summary of the benefits derived from the Brownfields Redevelopment Plan are listed below.

Impacted Materials and Coal Tar Wastes

It is a known fact that this part of the Detroit and Rouge River waterfront was landfilled during the early part of the century to accomodate industrial growth in the Detroit area. Fill material of unknown origin and character was brought to Zug Island and the adjacent properties, some of which may have been other industries' wastes and byproducts. Any attempt to separate formerly impacted fill from wastes generated by onsite operations would be a difficult if not impossible task, and would conceivably require excavation of the entire Zug Island area to a depth of several feet below groundwater to achieve uniform cleanup.

Realizing the impracticability of this task, removal of stored tar wastes for recycling eliminates potential source material from the site, and consolidation followed by capping further reduces the potential for exposure and groundwater impact. This approach specifically addresses exposure pathways to protect human health and the environment, and promotes contamination management onsite rather than transferring liability to an offsite location. An additional benefit is minimizing the disturbance of onsite materials that are old and degraded, which also reduces adverse affects to workers on the property and neighboring businesses.

Groundwater

Groundwater management is a key to any successful redevelopment program. At the Detroit Coke site, groundwater is as shallow as two feet below

surface, and slopes in an easterly direction towards the Detroit and Rouge Rivers. Fill material at the site extends to an average depth of ten feet below surface, and is in turn underlain across most of the site by a thick layer (40 feet) of natural clay. It is unlikely that shallow groundwater contained in the fill material will ever be developed into a resource. Based on these facts, groundwater at the site is best managed using a perimeter monitoring approach.

Impacted groundwater identified through previous investigation activities has been limited to a single occurrence of creosote-like product in an apparent upgradient well, and benzene at trace levels in the northern part of the site. Upgrading the existing well network by the addition of selected wells near the Tar Tank SWMUs and along the downgradient perimeter will provide adequate monitoring of both these occurrences.

Coal tar residues are persistent and relatively immobile in the subsurface. Monitoring their presence, and especially the potential migration from an offsite source, is a proven and accepted method of groundwater management for liquid tars, especially considering their difficulty for recovery using conventional technologies. The attenuation of benzene and other light fractions has been successfully demonstrated insitu through intrinsic bioremediation. The recommended monitoring well network at the Detroit Coke site, as shown on Figure 1, is well-suited to monitor and track the biodegradation of benzene across the property.

Proposed wells in the RFI workplan which are designed to monitor a deeper confined sand unit are not considered necessary at the time. Only one round of sampling and testing has been completed for selected wells screened in the shallow water table unit, resulting in the limited occurrences of chemical constituents mentioned above. In addition, the potential exists to breach the confining integrity of the clay layer that separates the water table unit from the deeper sand unit by drilling through it, and to assess the Detroit and Rouge River drainage basins for constituents migrating from offsite sources which is beyond the scope of this project. For these reasons, a period of sampling and testing of the proposed perimeter monitoring well network in the shallow water table zone is recommended before implementing a deep well installation and monitoring program.

Class I Injection Wells

Two Class I injection wells are located near the western boundary of the property. DCC has used these wells for the injection of waste byproducts from the coking industry, and recently submitted a request to EPA for commercializing these wells. Although the future of injection is not known at this time, the wells do not influence the decision to pursue a Brownfields Redevelopment Plan at the site.

If the wells are eventually permitted for injection of commercial waste, they become a viable part of the redevelopment plan. The strip of land adjacent to the western property boundary where the wells are located can be improved for access and egress, and unloading and cleanup operations. In the event the wells are not commercialized, they can be formally closed and abandoned and the surrounding property incorporated into the balance of the site for redevelopment. In short, the

wells can become an integral part of redevelopment for the site, or removed from service and the area used for other redevelopment options.

Summary

Along with the obvious benefits cited above , the Brownfields Redevelopment Plan is readily implemented and can be completed during a single field season. This is in contrast to the more lengthy process associated with a traditional RFI/CMS, in which case the site could remain in its present condition for several more years while testing, evaluation of alternatives, and negotiations of future actions are carried out. The goal of the Brownfields Initiative as described by Carol Browner is not strictly site cleanup, but more appropriately, property redevelopment.

From a beneficial reuse standpoint, there are several options under consideration for the Detroit Coke site. These include barge material storage, truck-transfer warehousing, commercial and private boat docking, expansion of other businesses in the vicinity, and area parking. DCC and AlliedSignal are considering these and other uses that will promote revitalization in the city, and are interested in working with the Detroit REUS Action Team to find a buyer for the property.

To pursue the Brownfield Redevelopment Plan presented here, the RFI workplan will be rewritten to incorporate the scope of work presented above. This will minimize the amount of changes necessary to revise the current RFI workplan and take advantage of the procedures and plans already reviewed and commented on by EPA. The main differences between the RFI workplan and the Brownfields Plan are the focus on perimeter monitoring and the elimination of further soils analysis, and the inclusion of remediation activities that prepare the site for redevelopment.

The responses to your comments in the Notice of Deficiency are provided in Attachment 1. As mentioned previously, many of the responses are the same whether the existing RFI workplan or the Brownfields Plan is pursued, while others specifically benefit from Brownfields redevelopment. We would be glad to meet and review the Brownfields Plan with you and establish a path forward. At that time we could also discuss whether to stay in the RCRA program, or move the project into Michigan's Site Reclamation Program (Act 201) and apply for assistance

from the REUS Action Team. DCC and AlliedSignal are commited to completing the Brownfield Plan and return the Detroit Coke site to beneficial reuse. Your assistance in this process will be a valuable asset for supporting the economic growth of the City of Detroit. Please call me at 314-421-0313, extension 233 if you have questions or need further information.

Sincerely,

CH2M HILL	AlliedSignal Inc.	Detroit Coke Corp.
C. George Lynn Vice President	Timothy J. Metcalf Manager, Site Remediation	Paul Choinski Project Manager

G. Rudloff

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
WU-16J

AUG 04 1997

CERTIFIED MAIL P 235 357 891
RETURN RECEIPT REQUESTED

Paul K. Choinski, Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: Notice of Deficiency Regarding Detroit Coke Corporation's April, 1996, RCRA Facility Investigation Workplan

Dear Mr. Choinski:

The United States Environmental Protection Agency (USEPA) has reviewed Detroit Coke Corporation's RCRA Facility Investigation Workplan dated April, 1996. Comments on the work plan can be found in Attachment I. Approval of the workplan cannot be given until these comments are adequately addressed. Pursuant to Part III(H)-(B)(2)(a) of each Underground Injection Control permit, you must submit a revised Workplan within 60 days of your receipt of this letter. Two Copies of the response should be directed to the address below:

U.S. EPA Region 5
Underground Injection Control Branch (WU-16J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Attention: Allen Melcer

On a related matter, in the interest of streamlining the Corrective Action process, USEPA is initiating the use of Performance Evaluation (PE) samples to determine the adequacy of the laboratory chosen for this project. The PE process will take the place of a laboratory audit and should prove faster than a standard audit. In the PE process, the USEPA will have PE samples prepared which contain some or all of the parameters of concern at the Detroit Coke site. The PE samples will then be sent to the contract laboratory identified by Detroit Coke for analysis. Detroit Coke will pay for the analysis of the PE samples. USEPA then compares the results from the contract lab with the known composition of the PE samples and will determine whether the contract lab meets USEPA standards. If it is determined that the contract lab is not adequate, Detroit Coke may select another lab and we will perform the PE process with the new lab. Please

be aware that once a laboratory is selected and the PE process is initiated, Detroit Coke must use that lab for the RFI. If Detroit Coke chooses to change labs once the PE process has been instituted, then we will have to begin the PE process anew. Please let me know if TriMatrix is still the lab of choice for the RFI, and if it is, please provide me the full mailing address for the lab.

If you have any questions, please contact me at (312) 886-1498 or Greg Rudloff at (312) 886-0455.

Sincerely yours,

Allen Melcer, Geologist
Direct Implementation Section
Underground Injection Control Branch

Enclosures

cc: Sarah D. Lile, Director, Dept. Of Environmental Affairs, City of Detroit
Steve Buda, Chief, Waste Management Division, Michigan Department of Environmental Quality

ATTACHMENT I
COMMENTS
RCRA FACILITY INVESTIGATION WORK PLAN
DETROIT COKE CORPORATION
DETROIT, MICHIGAN
MID 099 114 704

PROJECT MANAGEMENT PLAN

1.1 Purpose and Scope

1. Justification must be provided for eliminating other possible exposure pathways such as fugitive dust emissions and release to surface waters by runoff.

2.3 FUTURE USE OF THE SITE

2. Detroit Coke should obtain verification from the city of Detroit that there are no potential changes for zoning being considered for the immediate area.

4.1 PERSONNEL & PROJECT MANAGEMENT

3. Allen Melcer should be added as a U.S. EPA RFI Project Coordinator.

4.2 Technical Approach

4. If sampling indicates that ground water has been impacted, additional perimeter monitoring wells may be required.

4.3.1 SWMU-Specific Sampling and Analysis

5. Wells into the lower aquifer should be constructed so as to prevent them from becoming potential migration pathways between the aquifers.

6. Ground water samples should be taken in the granular backfill of each of the outfalls near their discharge to the Detroit or Rouge Rivers. The granular backfill for these pipes may act as a conduit for potentially contaminated ground water.

4.3.2 Background Sample Collection and Analysis

7. Recommendation 3 from the RFI Release Assessment Final Report Should be included to further investigate upgradient ground water quality in the area of P-6D-95.

QUALITY ASSURANCE PROJECT PLAN

1.1.1 Overall Project Objectives

8. It is premature to eliminate other possible exposure pathways such as fugitive dust emissions and release to surface waters by runoff.

1.4.1 Specific Objectives and Associated Tasks

9. The criteria that will be used to add parameters to the Site Target List should be described.

10. Justification must be provided that the exposure assumptions that are used in calculating the Act 307 Type C Generic Industrial Cleanup Criteria for Groundwater and Soil are applicable to the Detroit Coke site.

11. It should be stated what criteria will be used to determine if the ground water is impacted (e.g. Type C Industrial Cleanup Criteria).

12. It should be stated what criteria will be used to determine if the ground water poses a risk to the rivers (e.g.. Type C Industrial Cleanup Criteria Groundwater GSI Values).

13. Page 9 of 14: The means of preserving VOCs samples in soil must be discussed. There are several ways to accomplish this. However, the procedure must be fully explained. If the preservation technique will impact the subsequent analytical strategy, then this should also be stated with an understanding as to whether or not specific project objectives may or may not be ultimately fulfilled (i.e. detection limits, accuracy & precision criteria, blank acceptance criteria, etc...). Note that the low concentration VOCs in soil method relying on purge & trap, is no longer considered an acceptable analytical strategy by the U.S. EPA as it has been deleted from SW-886, as of June 13, 1997.

1.4.3 Data Quality Objectives

14. Detroit Coke should add details concerning which levels of QC (i.e. QC sample types and procedures) will NOT be performed in the case of "expedited data". It is generally understood that the "confirmation data" to be provided for the final target parameter list will consist of a CLP-like

data deliverable package.

2.2 Management Responsibilities

15. Allen Melcer should be added as a U.S. EPA RFI Project Coordinator.

2.4 Laboratory Responsibilities

16. The location of the laboratory, including the mailing address, should be stated in this section.

3.3.3 Laboratory Completeness Objectives

17. Rephrase the first sentence to read, "Lab completeness is a measure of the amount of valid measurements obtained from all the measurements planned for the project."

4.2.2.1 Equipment Rinse Blank Collection, and 4.2.2.2 Field Duplicitive Collection

18. What is the anticipated source of water to be used for the final rinse? (How "clean" will it be?) Note that the frequencies cited for the rinse blanks and field duplicate samples applies to each parameter group. This information should be inserted into these respective sections.

4.2.2.4 Trip Blank Preparation

19. For organic constituents, organic free reagent water, or HPLC grade water should be used.

5.1.3 Transfer of Custody and Shipment Procedures

20. Will co-located samples be collected? This procedure should be decided in advance, and if this will be the case, the procedure for co-locating samples should be provided.

5.3 Final Evidence Files

21. What will the final evidence file specifically be comprised of? What is the retention period for the evidence file? It should be stated that these files should be offered to the U.S. EPA prior to disposal.

7.2.2 List of Associated QC Samples

22. Some of the constituents which appear on the facility target list such as acetonitrile and acrylonitrile are poor purging, relatively toxic compounds. Unless the matrix

spike solution is fortified with such compounds as a further demonstration of method accuracy, "non-detect" data may not be accepted as indication of the "absence" of such compounds.

9.2.2 Procedures Used to Validate Lab Data

23. Referring to the final paragraph in this section, it should be stated that decisions to repeat sample collection will not take place without the advisement and approval of the U.S. EPA project coordinator.

10.2.1.3 Internal Lab Audit Procedures

24. The results of internal blind audit sampling should be reported to the U.S. EPA in addition to the reporting of investigational and other QC data.

13.2 Laboratory Corrective Action

25. There is a typographical error in the 4th line of Page 4 of 5. The word "pertinent" should be replaced with "percent".

TABLES

Table 1-1 Summary of Sampling and Analysis Program

26. The intended depth of sampling has not been indicated in this table. The term "as amended" which appears in some places under the column heading, "laboratory analysis" should be defined. There are several SOPs contained in Appendix A which bear no apparent relation to this project, (such as the SOPs for analysis of cyanide). Why were these SOPs included in the QAPP?

Table 6-1, Instrument Calibration, and VOCs SOP in Appendix A

27.a. The low concentration method for soils may not be applicable if samples are preserved in methanol. There must be some attention paid to detail in the matter of how sample preservation may affect the analytical procedure. If the preservation technique will necessitate a revised analytical procedure then that procedure and all corresponding DQOs must be defined. (See sections 5.5, 7.2.2 and 12.2 of the VOCs SOP.)

b. In Table 6-1, note that there is no provision apparent in the VOCs SOP for an initial calibration verification

sample. Is it still intended to analyze such a sample with the implied acceptance criteria?

c. Will TICs be requested for this analysis? (See section 16.4 of the VOCs SOP.)

Table 6-1, page 2, and the SVOCs SOP

28.a. Referring to the fourth column heading, the % RSD for each non CCC of interest must be less than or equal to 40%, as stated in the SOP. Also, there is a typo in the reference to N-nitroso-n-dipropylamine. The minimum RF for all non SPCCs should be greater than or equal to .01, as stated in the SOP.

b. Referring ot the 6th and 7th columns of this table, note that the SVOC SOP apparently does not call for an initial calibration verification sample. Is it still intended to include this sample?

c. It should be stated in the final column of this table for SVOCs that if the continuing calibration verification result for non CCCs of interest is greater than plus or minus 40%, corrective action must be taken.

Table 7-1 Analytical Methods and Detection Limits

29. For the metals in soil analysis, the laboratory should adhere to EPA Regional guidance concerning proper sample preparation for metals determination. This guidance is enclosed with this letter.

Table 7-2 Sample Containers, Preservatives and Holding Times

30. The allowable holding time until sample extraction for SVOCs should be added to this table.

Table 7-3 Organic Parameters and Detection Limits

31. Please note that among other compounds, relatively toxic acetonitrile and acrylonitrile will not purge efficiently and most likely will be undetected unless present in high concentrations. The relevant State of Michigan action limits have not been included in the QAPP, but should ordinarily be indicated in this table. Apparently, the compounds, 2-chloro-1,3-butadiene and trans-1,4-dichloro-2-butene were not included in the proposed 8260 founded SOP. Standards for initial and continuing calibration should be included in the analytical procedure. Criteria for quantitation should be incorporated into the QAPP. Also,

these compounds should be assigned to an internal standard. It is apparent that both SOP standards 1A and 1B will be utilized in order to address each of the compounds included in Table 7-3.

32. The compound, diphenylamine, was apparently not included in the SVOC SOP. Standards allowing for its initial and continuing calibration as well as criteria for quantitation should be incorporated into this QAPP. Although 3 and 4 methylphenol are indicated as separate parameters in this table, note that they will be reported as a sum. The QAPP table should ge modified accordingly.

Table 8-1 Method Specific Data Quality Objectives Matrix Spike and Duplicate Control Limits

33. With reference to section 11.5 of the SVOC SOP, it should be adequately clarified that the matrix spiking compounds will be spiked into the sample matrix, not the sample extract.

Table 8-2 Method Specific Data Quality Objectives Surrogate Compound Percent Recovery Control Limits

34. Surrogate compounds should be spiked into the sample matrices. (See section 11.4 of the SVOCs SOP.)

APPENDIX B - FIELD SAMPLING SOPs

HG-7, Version I Monitoring Well Purge and Sampling With a Bailer

35. It should be specified that the volume of the filter pack should be included when calculating the volume of standing water in the well.

36. The order of sample collection should be specified as it is in Procedure 8. in the Field SOP for Split-Spoon Sampling.

HG-3, Version I Permanent Wells Installed Through Hollow Stem Augers

37. The bentonite seal should be allowed to hydrate prior to tremie grouting the remaining annular space.

38. The use of a side-discharging tremie pipe is recommended.

FIELD SAMPLING PLAN

5.0 Decontamination Procedures

39. Referring to the first bullet, bailers are not recommended for collecting VOC samples.

6.2.1 Sample Frequency and Selection of Samples for Laboratory Analysis

40. A number of questions should be addressed. How will soil samples be preserved? Which samples and parameter groups shall be taken first, and what is the order of sampling until the last sample is taken? Referring to the second paragraph, it seems as if the "completeness DQO" will only be 25% for soil samples, in contrast to what is stated in section 3 of the QAPP where it is indicated that a completeness greater than 90% will be achieved. Under what conditions will soil samples be selected for analysis (i.e. on the outcome of a positive "detect" based on the expedited sample, or a negative result, and at which decision level for each respective parameter)? Which project objectives are associated with the selection?

6.2.3 Surface Soil Sample Collection

41. To what depth will samples be taken? What criteria will define the sampling depth and depth interval? Referring to "Field Screening", under what circumstances will the lab fraction actually be analyzed? Note that the "expedited lab analysis" should count as "field screening" per a recent U.S. EPA memorandum.

6.3.2 Ground Water Sample Collection

42. Dissolved oxygen and turbidity should also be included as indicators of groundwater stabilization. Will both 3 well volumes and stabilization criteria be applied prior to allowing sample collection? Note that a 10% range between successive pH measurements is excessive and favors uncertainty with basic water samples relative to acid samples.

Field Sampling Plan Table 4-1 Sample Containers, Preservatives and Holding Times

43. The holding time until SVOC sample extraction should be indicated in this table.

Appendix A TriMatrix Environmental Laboratory SOPs

44. Due to the extended time frame for USEPA review, the SOPs presented in this appendix may have been revised since the document was submitted. Please check with the laboratory to ensure that the SOPs are still current.

Appendix A, 8260 SOP Section 13.3.1.2

45. What is the prescribed corrective action?

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

VIA FAX AND MAIL

March 7, 1996 WU-17J

Mr. Paul K. Choinski
Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: SANBORN MAP of Detroit Coke Facility

Dear Mr. Choinski:

As we discussed earlier today, I am sending you a copy of a 1983 SANBORN map of the Detroit Coke facility which I have acquired. Of particular interest to USEPA are the drainage canal to the Rouge River and the tanks shown to the west of former ovens 1 and 4. Since you are in the process of developing a RCRA Facility Investigation (RFI) workplan, I think this map will be useful in pinpointing areas which may have been subjected to past releases.

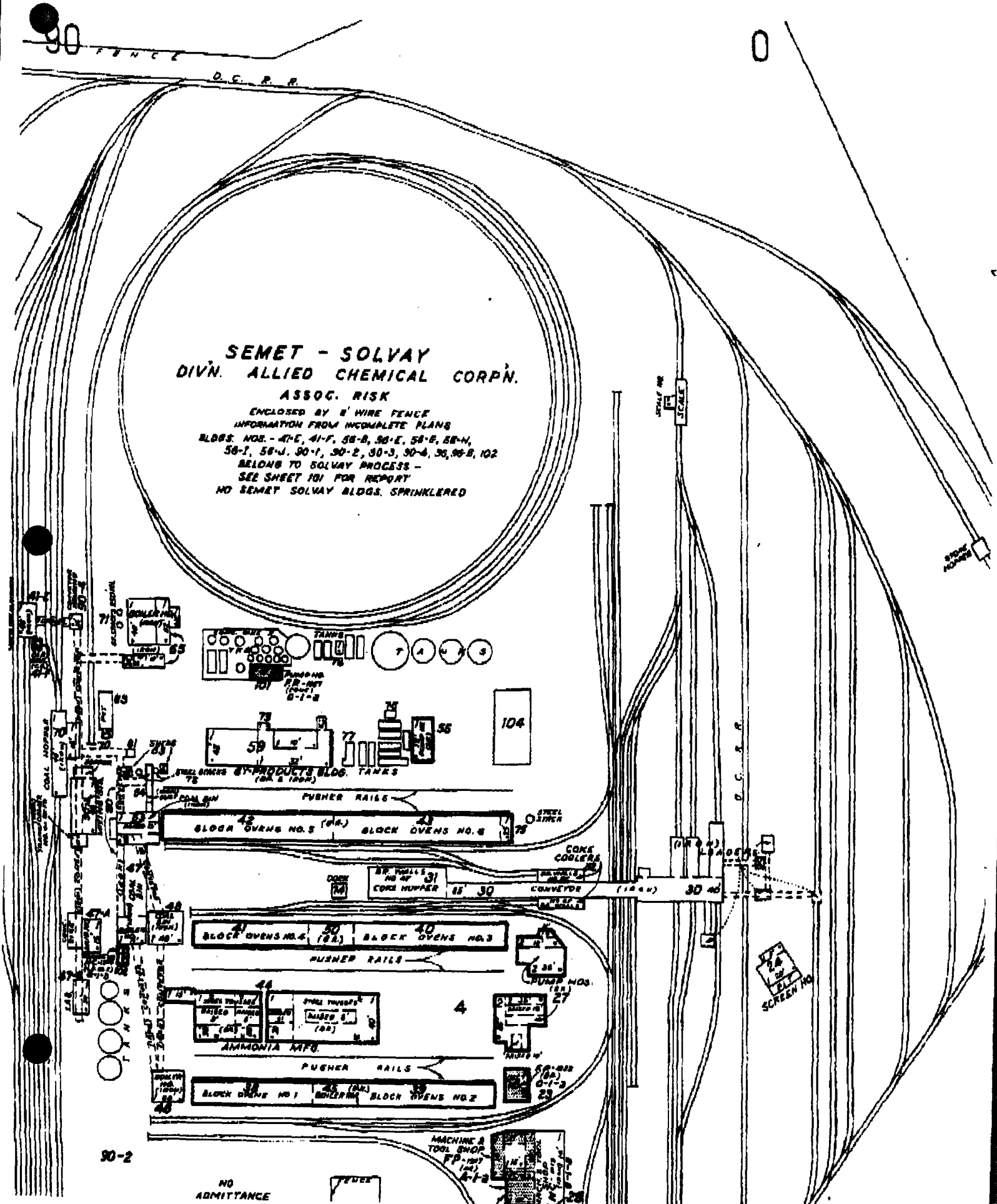
If you have any questions, please feel free to contact either Greg Rudloff at (312) 886-0455 or myself at (312) 886-1498.

Sincerely yours,

Allen Melcer, Geologist
Underground Injection Control Branch

Enclosure

1983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FENCE
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SEMET - SOLVAY
DIVN. ALLIED CHEMICAL CORP'N.
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BLDGS. NOS. - 41-E, 41-F, 56-B, 56-E, 56-G, 56-H, 56-I, 56-J, 90-1, 90-2, 90-3, 90-4, 96, 96-B, 102
BELONG TO SOLVAY PROCESS -
SEE SHEET 101 FOR REPORT
NO SEMET SOLVAY BLDGS. SPRINKLERED
SCALE
STONE HOPPER
TANKS
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101
59
BY-PRODUCTS BLDG.
TANKS
104
55
PUSHER RAILS
BLOCK OVENS NO. 5
BLOCK OVENS NO. 6
COKE COOLERS
CONVEYOR
30
BLOCK OVENS NO. 4
BLOCK OVENS NO. 3
PUSHER RAILS
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PUSHER RAILS
BLOCK OVENS NO. 1
BLOCK OVENS NO. 2
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MACHINE & TOOL SHOP
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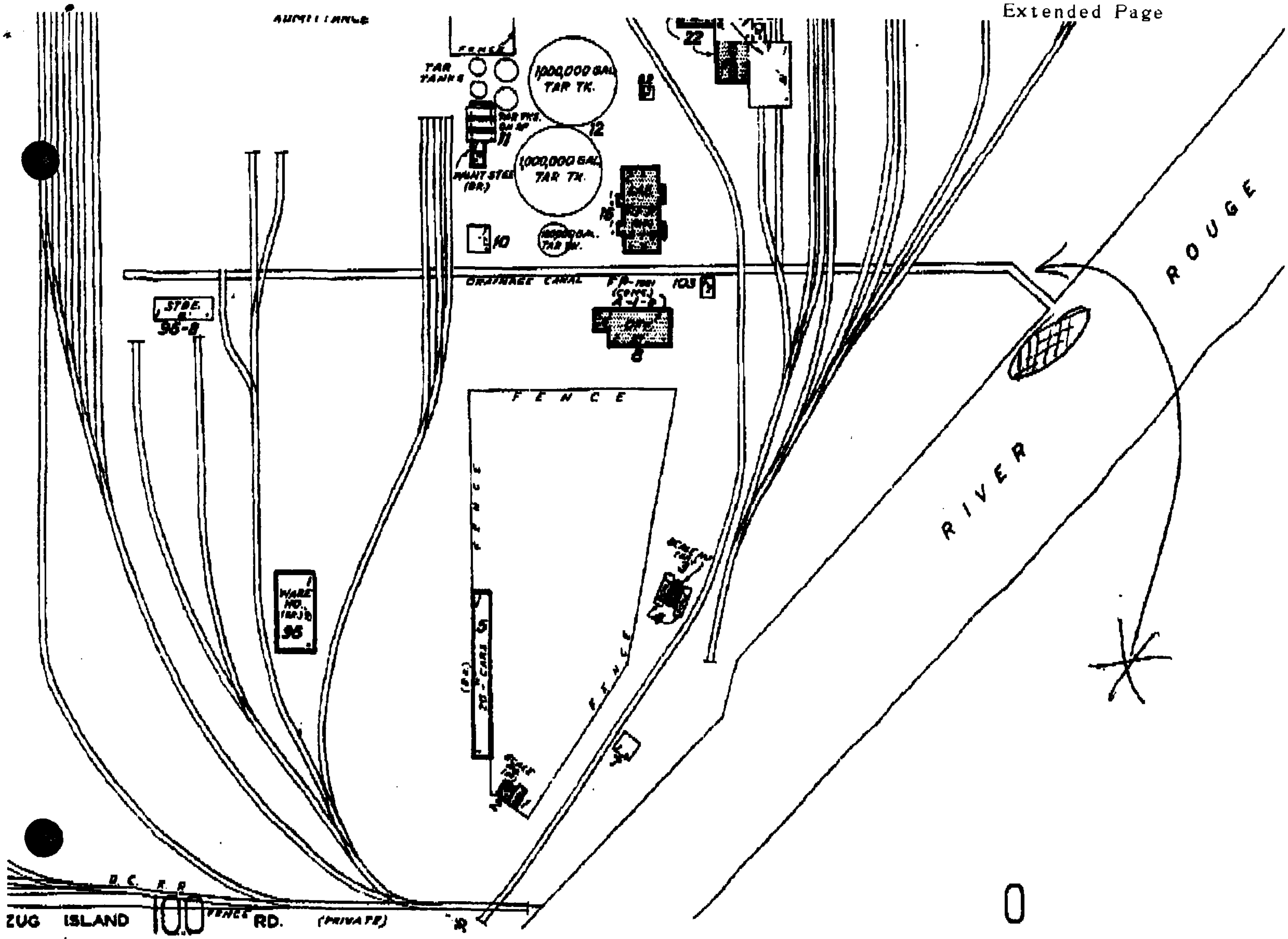

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 07 1995

REPLY TO THE ATTENTION OF:

WD-17J

Paul K. Choinski
Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: Release Assessment Project Schedule

Dear Mr. Choinski:

This letter is to clarify the United States Environmental Protection Agency's (USEPA) position on the due date for the delivery of the final Release Assessment (RA) report to the USEPA. The project schedule for the RA contained in Figure 5-1 of the RA Project Management Plan shows the submittal of the final report to the USEPA at the beginning of the sixth month after receiving USEPA approval of the RA Workplan. The USEPA approved the Workplan on May 8, 1995, so the due date for the final report should be October 8, 1995.

However, Attachment H, Corrective Action Schedule of Compliance, of each of Detroit Coke's Underground Injection Control (UIC) permits states on Page 3 that the submittal of the RA Final Report shall occur "Within 60 calendar days after the completion of the RFI Release Assessment." Following conversations with you and with Mr. Craig Vanden Berge of Horizon Environmental, it became apparent that some confusion exists regarding what constitutes completion of the RFI RA as referenced in the UIC permits. In the case of the RA, USEPA views completion to occur upon completion of the data validation and evaluation. According to Figure 5-1 of the Project Management Plan, this will occur at the end of the third month following USEPA approval of the RA Workplan. Thus, the delivery of the final RA report should occur on October 8, 1995, which is 60 days after completion of data validation and evaluation. However, progress reports on RA activities are still due bimonthly.

On a related matter, the corrective action schedule of compliance contained in Attachment H of your UIC permits states that the deadline for Detroit Coke's submittal of the RFI Workplan is "Within 120 calendar days after receipt of EPA's approval of the RFI Release Assessment Final Report". Even though an RFI Workplan would not be due until February 5, 1996, at the absolute earliest, USEPA suggests that Detroit Coke submit a draft workplan in the near future so that an approved workplan will be

ready by next spring. USEPA recognizes that the workplan will not be complete until information gathered during the RA is collected and evaluated, however, the majority of the RFI Workplan can be completed without the final RA results. Please give me your response to this proposal.

Should you have any questions regarding this matter, please feel free to contact me at (312) 886-1498.

Sincerely yours,

Allen Melcer, Geologist
Underground Injection Control Section

bcc: Greg Rudloff, RCRA Michigan Permits, HRPM-8J

WD-17J:A.Melcer:am:8/4/95:F"RASCHED"

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

MAY 08 1995

WD-17J

CERTIFIED MAIL Z 411 898 627
RETURN RECEIPT REQUESTED

Paul K. Choinski, Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: Approval of Detroit Coke Corporation's January, 1995, Revised RCRA Facility Investigation (RFI) Release Assessment Workplan

Dear Mr. Choinski:

The United States Environmental Protection Agency (USEPA) has reviewed Detroit Coke's April 5, 1995, response to the conditional approval of the above-referenced revised workplan. The USEPA grants final approval of the workplan, although a few clarifications regarding Detroit Coke's response to our comments are found below.

With regards to sampling of ground water under Solid Waste Management Units (SWMU) in which the physical structure does not extend into the water table, Detroit Coke states in their letter of April 5, 1995, that detection of contaminants in the soil that are not consistent with materials stored in the SWMU should not prompt additional investigation of either the soil or ground water beneath the unit during the RFI. USEPA disagrees with this statement. One of the objectives of the RFI is to determine if contamination is present at the site and, if it is, the amount, extent and cause of the contamination. USEPA recognizes the ubiquitous nature of coal dust at the site and has agreed with Detroit Coke to set background levels with that in mind. However, should a contaminant be found in the soil that is not part of the background contaminants, USEPA may request that an investigation be performed to determine the source and nature of the contamination regardless of whether the contaminant in question is known to have been stored in the SWMU. This investigation, if conducted, will likely require that ground water sampling be performed.

With respect to your response on Table 7-3, although there are a few inconsistencies in the information presented in the table, USEPA agrees with the description in your letter of April 5, 1995, of how the Target Limits for the RA are determined.

Enclosed you will find the signature page for the RA Quality Assurance Project Plan. As you can see, the appropriate USEPA personnel have signed the plan. Please sign the page, have your consultants do so, copy the completed page and return the original to Allen Melcer of my staff.

In a recent conversation with Mr. Melcer, you asked whether the USEPA or the Michigan Department of Natural Resources (MDNR) will be supervising the corrective action activities being conducted at your facility. The MDNR is currently in the process of receiving authorization for corrective action, however, they are not expected to get final approval in the near future. In addition, the current corrective action requirement for Detroit Coke is found in its Underground Injection Control (UIC) permits. The UIC program is being implemented in the State of Michigan by the USEPA. The State of Michigan has not applied for, nor been granted, primacy for the UIC program. For these reasons, corrective action at Detroit Coke will be overseen by the USEPA, with input from the MDNR.

On another matter, the USEPA has reviewed your letter of March 16, 1995, regarding the effect of the Land Disposal Restriction Phase II Rule on your facility. We agree with your contention that the land disposal restrictions for waste codes K141, K142, K143, K144, K145, K147, K148, K149, K150 and K151 do not apply to the underground injection activities at the Detroit Coke facility based on the recycling of coke manufacturing process residues. This exclusion to the land disposal restrictions is only valid as long as the recycling continues.

Please notify either Allen Melcer at (312) 886-1498, or Greg Rudloff at (312) 886-0455 as soon as possible regarding the scheduling of RA field work. They plan to be on site to witness certain field procedures. Please also contact them if you have any questions about the content of this letter.

Sincerely yours,

Richard J. Zdanowicz

Richard J. Zdanowicz, Chief
Underground Injection Control Section

Enclosure

G. Rudloff

From: ALLEN DEBUS
To: RUDLOFF-GREGORY
Date: Thursday, April 13, 1995 3:02 pm
Subject: detroit coke qapp

Here are my comments concerning the Table 7-3.

Overall, I wish Detroit Coke had clarified matters for us by presenting the table as we had originally requested. They are apparently relying on a variety of regulatory criteria for sources of target detection limits, which, in turn, are not entirely consistent with the laboratory SOP reporting limits. However, I do not see the point of holding up the project for sake of adding some additional information, much of which is probably understood to be in place anyway, to table 7-3.

So, here are my comments concerning the table, which serve to document apparent "inconsistencies" in their approach, and possibly also to be used as a basis for requiring presentation of a full table next time.

1. Detection limits for the dichlorobenzenes indicated in Table 7-3 are not equal to the target method detection limits expressed in the Act 307B Table (for both soil and groundwater). Note that the Table 7-3 detection limits are not as conservative as required under Act 307 for both the groundwater and soil matrices.

2. Although 4-methylphenol (p-cresol) is reported as a target parameter in Table 7-3, in actuality any m-cresol that is present in the sample will coelute with p-cresol. The actual target parameter that will be reported is (m+p) cresol, not simply 4-methylphenol. (As an aside, note that for soil, m-cresol is about 10 times more toxic when referring to the U.S. EPA's DQL table - so if this were an EPA lead scenario, for risk assessment evaluation, the sum of the two isomers should be evaluated as m-cresol to be most conservative. There seems to be a similar & analogous pattern with the Act 307 data.)

3. There are several compounds included in Table 7-3 which are also reflected in submitted method SOPs that are apparently not in the Act 307 table. Supposedly, there is a data usage for these target parameters, but it is not clear which target method levels or health criteria apply. Therefore, it is not presently possible to ascertain whether or not the SOP reporting limits are acceptable for these compounds. The compounds in question are annnotated by an arrow to the left of the compound name in the attachment to this memo.

4. Fluorene is a PAH, and should, perhaps, also be flagged by an asterisk in Table 7-3.

5. The compound, 3,3′ dichlorobenzidine is spelled incorrectly.

6. The compound, N-nitrosodiphenylamine, will decompose to diphenylamine (which is included on the method SOP list). Therefore, this compound should either be deleted, or measured indirectly as a diphenylamine + N-nitroso.... sum.

7. Pyridine is not included in any of the method SOPs′ target lists, although it is an additional required parameter. A means should be proposed for measuring this target analyte before the samples are collected. (If, as indicated by Table 7-3, pyridine will be measured as a semivolatile compound, then procedures for initial and continuing calibration, as well as acceptance criteria for such procedures should be proposed. Since this compound is a "poor performer", and may be difficult to analyze, it should also be included in the matrix spiking solution, so that its performance in the matrix can be more closely evaluated.) A summary of how the analysis shall be performed should be submitted.

Attachment

TABLE 7 - 3

ORGANIC PARAMETERS AND DETECTION LIMITS[1]

	Water (ug/l)	Soil (mg/kg)
Volatile Organic Compounds (8240)		
Purgeable Aromatics		
Benzene	1	0.010
Toluene	1	0.010
Ethyl Benzene	1	0.010
Total Xylenes	3	0.030
Semi-Volatile Organic Compounds (8270)		
Full Scan Base/Neutral/Acid (BNAs) plus Pyridine (Includes PNAs)		
Phenol	5	0.33
Bis(2-chloroethyl)ether	5	0.33
2-Chlorophenol	5	0.33
1,3-Dichlorobenzene	5	0.33
1,4-Dichlorobenzene	5	0.33
1,2-Dichlorobenzene	5	0.33
2-Methylphenol	5	0.33
2,2'-oxybis(1-Chloropropane)	5	0.33
4-Methylphenol	5	0.33
N-Nitroso-di-n-propylamine	5	0.33
Hexachloroethane	5	0.33
Nitrobenzene	5	0.33
Isophorone	5	0.33
2-Nitrophenol	5	0.33

[1] Detection limits may be elevated due to matrix interference. The listed values are consistent with Michigan Act 307 recommended method detection limits as specified in MERA Memorandum #6, Rev. 2, February 22, 1993

TABLE 7 - 3

ORGANIC PARAMETERS AND DETECTION LIMITS

		Water (ug/l)		Soil (mg/kg)
Semi-Volatile Organic Compounds (8270) ***(continued)***				
2,4-Dimethylphenol		5		0.33
Bis(2-chloroethoxy)methane		5		0.33
2,4-Dichlorophenol		5		0.33
1,2,4-Trichlorobenzene	(R)	5	(R)	0.33
4-Chloroaniline		20		1.3
Hexachlorobutadiene	(R)	5	(R)	0.33
4-Chloro-3-methylphenol		5		0.33
2-Methylnaphthalene		5		0.33
Hexachlorocyclopentadiene	(R)	5	(R)	0.33
2,4,6-Trichlorophenol		5		0.33
2,4,5-Trichlorophenol	50	5	1,700	0.33
2-Chloronaphthalene		5		0.33
2-Nitroaniline		20		1.7
Dimethylphthalate		5		0.33
2,6-Dinitrotoluene		5		0.33
3-Nitroaniline		20		1.7

Dod added U.S. Comm. #2

2,4-DNT is on MDNR list

TABLE 7 - 3

ORGANIC PARAMETERS AND DETECTION LIMITS

	Water (ug/l)	Soil (mg/kg)
Semi-Volatile Organic Compounds (8270) ***(continued)***		
2,4-Dinitrophenol	20	1.7
4-Nitrophenol	20	1.7
Dibenzofuran	5	0.33
2,4-Dinitrotoluene	5	0.33
Diethylphthalate	5	0.33
4-Chlorophenyl-phenyl ether	5	0.33
Fluorene	5	0.33
4-Nitroaniline	20	1.7
4,6-Dinitro-2-methylphenol	20	1.7
N-nitrosodiphenylamine decomposes to diphenylamine	5	0.33
4-Bromophenyl-phenyl ether	5	0.33
Hexachlorobenzene (R)	5 (R)	0.33
Pentachlorophenol	1	1.7
Di-n-butylphthalate	5	0.33
Butylbenzylphthalate	5	0.33

RL. 20 1.7

TABLE 7 - 3

ORGANIC PARAMETERS AND DETECTION LIMITS

	Water (ug/l)	Soil (mg/kg)
Semi-Volatile Organic Compounds (8270) ***(continued)***		
3,3'-Dichlorobenzidine	20	2.0
Bis(2-ethylhexyl)phthalate	5	0.33
Di-n-octylphthalate	5	0.33
Acenaphthene*	5	0.33
Acenaphthylene*	5	0.33
Benzo(b)fluoranthene*	5	0.33
Benzo(k)fluoranthene*	5	0.33
Benzo(a)pyrene*	5	0.33
Indeno(1,2,3-cd)pyrene*	5	0.33
Dibenzo(a,h)anthracene*	5	0.33
Benzo(g,h,i)perylene*	5	0.33
Naphthalene*	5	0.33
Phenanthrene*	5	0.33
Anthracene*	5	0.33
Fluoranthene*	5	0.33
Pyrene*	5	0.33
Benzo(a)anthracene*	5	0.33
Chrysene*	5	0.33
Pyridine**	10	0.33

Why not added to list? Fluorene last

not on SOP method list

* Polynuclear Aromatics (PNAs).
** Required Additional Parameter.

DETROIT COKE CORPORATION
BOX 09229/DETROIT, MI 48209/(313) 842-6222

April 5, 1995

Mr. Richard J. Zdanowicz
United States Environmental Protection Agency
Chief, Underground Injection Control Section
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

RE: DETROIT COKE CORPORATION, RCRA CORRECTIVE ACTION RELEASE ASSESSMENT WORK PLAN

Dear Mr. Zdanowicz:

We have received your comments on the revised RCRA Facility Investigation Release Assessment Work Plan QAPP. Exclusive of comments number 2 and 5 we are submitting replacement pages that assimilate your comments.

With respect to comment number 2, we offer for your consideration the following scenarios under which we do not believe it will be necessary to sample ground water if soil sampling results indicate that soil contamination is present at a SWMU:

1. The release assessment is intended to determine if a release has occurred from a given SWMU. Detection of soil contamination does not necessarily indicate that a release has occurred. Any contaminants detected will be compared to background data as we acknowledge ubiquitous contamination of surficial soils associated with air deposition of coal dust and the potential presence of fill material of unknown quality. Furthermore, detection of contaminants not consistent with materials stored in the unit should not prompt additional investigation during the RFI phase of either the soil or ground water beneath the unit.

2. Under the circumstance where surficial soils exhibit contamination related to a release from the SWMU being investigated, that SWMU will be carried forward to the RFI phase for additional evaluation. The RFI of that SWMU will involve determining the horizontal and vertical extent of impact. If, however, as part of the RFI work the vertical extent of contamination is found to be limited in depth and not extend to the water table it should not be necessary to sample ground water beneath that SWMU.

3. If, as part of the release assessment or subsequent investigation, ground water contamination is found to be widespread beneath the site, characterization of ground water at each and every SWMU may not provide useful data. Rather, ground water

quality at points of exposure (e.g., ground water leaving the site or migrating to surface water) may be all that is of interest, acknowledging widespread and commingling contamination from multiple indistinguishable sources.

As you can see there are possible circumstances that would preclude the need to characterize ground water at a SWMU where soil contamination has been detected. We would prefer to evaluate the results of the RA prior to determining the scope of work that will be necessary to fulfill the objectives of the RFI phase.

With respect to comment number 5, the Michigan Environmental Response Act; P.A. 307, (MERA or Act 307) will be the principle state ARAR governing cleanup at this site. MERA requires cleanup to Type A, B or C criteria as specified in the administrative rules. The intended reporting limits listed in Table 7-3 are the "Target Method Detection Limits" listed in MERA Memorandum 6, Rev. 3[1], which under Act 307 constitute the Type A criteria (Rule 707). In cases where the risk-based (Type B) criteria are below the target method detection limits (e.g., carcinogenic PNAs) the most stringent cleanup criteria are established at the method detection limits [Rule 721(a)]. Since the initial screening levels for the RA are the Type B criteria (most stringent), the method detection limits are in fact the "target Levels" requested. Consequently, no change to Table 7-3 is proposed.

It is our expectation that the enclosed replacement pages will satisfy your concerns regarding your last set of comments on the QAPP. Our consultant, Horizon Environmental, will be contacting either Allen Melcer and/or Greg Rudloff to confirm this expectation and to schedule the start of the field work in the near future.

If you have any comments or additional concerns I may be contacted at (313) 842-6222.

Sincerely,

Paul K. Choinski

Paul K. Choinski
Facility Manager
On behalf of Detroit Coke Corporation

cc: Craig Vanden Berge, Horizon Environmental (w/o attachments)
Greg Rudloff, U.S. EPA Waste Management Division (w/ attachments)
Allen Melcer, U.S. EPA Underground Injection Control Section (w/ attachments)

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[1] *Analytical Detection Level Guidance for Environmental Contamination Response Activities under Act 307 Rules*, February 4, 1994.

Revisions Summary

RCRA Facility Investigation - Release Assessment Work Plan

Detroit Coke Corporation

The attached pages should be substituted in the to complete the revisions of the RA work plan in accordance with the U.S. EPA comments dated March 3, 1995.

The substitutions are:

Field Sampling Plan

- Section 6.3.2, Page 9 of 10
- Table 6-1

Quality Assurance Project Plan

- Signature Page
- Section 3.0, Page 5 of 5
- Section 4.0, Page 2 of 3
- Table 1-1
- Table 11-1
- SOP - Soil and Ground Water Sampling using the Geoprobe

conductivity of ground water purged from temporary monitoring wells constructed during the RA will be measured and evaluated to demonstrate ground water stabilization prior to collection of samples for laboratory analysis. Development water will be discharged onto the ground surface next to the well unless free product is observed, in which case the development water will be containerized and disposed of in a proper manner with regard to state and federal regulations.

Soil cuttings will be stockpiled. At the completion of the RA investigation, all temporary monitoring wells will be abandoned by over-drilling with hollow-stem augers and removing the well materials. The well boring will be backfilled with a mixture of the stockpiled soil cuttings and bentonite (cuttings will be returned to the well borehole from which they came). If the soil cuttings are impacted, that impact will be addressed under the remedial response initiated for the SWMU, thereby eliminating the need for off-site disposal of soils during the RA. Handling of soil cuttings in this manner is consistent with MDNR guidance (MERA Operational Memorandum #7). The upper foot of borehole will be sealed with holeplug.

6.3.2 GROUND WATER SAMPLE COLLECTION

Prior to sampling, the temporary monitoring wells will be purged of a minimum of three well volumes. Well volume calculation will be done in accordance with Horizon Environmental's SOP in Appendix B of the QAPP with the well volume to include the well filter pack. Purging and sampling of the monitoring wells will be done using a peristaltic pump and dedicated Teflon tubing or Teflon bailers and new polypropylene rope. Ground water temperature, pH, and conductivity will be measured during the well purging procedure as a means of determining sufficient well recharge. A ground water sample will collected after these parameters have stabilized to within 10% between two successive well volumes (minimum of three removed), or after the well has been bailed/pumped dry twice. Field measurements will be made in accordance with the field SOPs included in Appendix B of the QAPP.

Sample collection will be performed using low-flow rates, or careful bailing techniques to minimize collection of suspended soil particles and other colloids. New latex gloves will be worn by field personnel during the sampling of each well.

Each well will be observed for the presence of free-product and all ground water samples will be submitted to the laboratory for analysis.

TABLE 6-1
Summary of Sampling and Analysis Program
RFI-Release Assessment
Detroit Coke Corporation
Detroit , Michigan

Location	Matrix	Field Parameters	Laboratory Analysis*	Investigative Samples	Duplicates	Blanks** Eq. Rinse	Blanks** Trip	MS/MSD	DQO
SWMU 1	Soil	Visual, FID/PID Screening	8240 (BTEX), 8270 (PNAs)	2-3	1/10	1/10	NA	1/20	I/IV
SWMU 1	Soil	Visual, FID/PID Screening	---	6	NA	NA	NA	NA	I
SWMU 2	Soil	Visual, FID/PID Screening	8240 (BTEX), 8270 (BNAs with pyridine)	3-6	1/10	1/10	NA	1/20	I/IV
SWMU 2	Soil	Visual, FID/PID Screening	---	12	NA	NA	NA	NA	I
SWMU 18	Soil	Visual, FID/PID Screening	8240 (BTEX), 8270 (BNAs with pyridine)	1-2	1/10	1/10	NA	1/20	I/IV
SWMU 18	Soil	Visual, FID/PID Screening	---	4	NA	NA	NA	NA	I
SWMU 20	Soil	Visual, FID/PID Screening	8240 (BTEX), 8270 (BNAs with pyridine)	3-5	1/10	1/10	NA	1/20	I/IV
SWMU 20	Soil	Visual, FID/PID Screening	---	11	NA	NA	NA	NA	I
Background Soil	Soil	Visual, FID/PID Screening	8270 (PNAs)	8	1/10	1/10	NA	1/20	I/IV
SWMU 1	GW	---	8240 (BTEX), 8270 (PNAs)	1	1/10	1/10	1/shipment	1/20	IV
SWMU 2	GW	---	8240 (BTEX), 8270 (BNAs with pyridine)	1	1/10	1/10	1/shipment	1/20	IV
SWMU 20	GW	---	8240 (BTEX), 8270 (PNAs)	1	1/10	1/10	1/shipment	1/20	IV
Upgradient Ground Water	GW	---	8240 (BTEX), 8270 (BNAs with pyridine)	2	1/10	1/10	1/shipment	1/20	IV

NA - not applicable

* See Table 7-3 of the QAPP for parameter list.

* * Equipment Rinse and Trip Blanks are aqueous samples and will be analyzed for 8240 (BTEX) only.

Ground water samples will be collected only if ground water is encountered during soil sample collection.

QUALITY ASSURANCE PROJECT PLAN

RCRA Facility Investigation - Release Assessment

at

DETROIT COKE CORPORATION

Detroit, Michigan

U.S. EPA ID Number MID099114704

REVISION 1

January 1995

Paul Choinski
Detroit Coke, RA Project Manager

Allen J. Reilly
Horizon Environmental, RA Project Manager

Craig A. VandenBerge
Horizon Environmental, RA Technical Manager

Jeffrey C. Sutherland
Horizon Environmental, RA Quality Assurance Director

Greg Rudloff
U.S. EPA, Project Coordinator

U.S. EPA, Regional Quality Assurance Manager

MS/MSD samples. One MS/MSD will be collected for every 20 or fewer investigative samples.

The general level of the QC effort will be one field duplicate blank for every 10 or fewer investigative samples and one equipment rinse blank for every 10 or fewer investigative samples. One trip blank consisting of deionized organic-free water will be included along with each shipment of aqueous volatile organic compounds (VOCs) samples. The trip blank will be analyzed for VOCs only.

MS/MSD samples are investigative samples. Soil MS/MSD samples require no extra volume for VOCs or extractable organics. However, aqueous MS/MSD samples must be collected at triple the volume for VOCs and double the volume for extractable organics. One MS/MSD sample will be collected/designated for every 20 or fewer investigative samples per sample matrix (i.e., ground water, soil).

The number of field duplicate samples, equipment rinse and trip blank samples, and matrix spike samples to be collected are detailed in the FSP and in Table 1-1. Sampling procedures are also specified in the FSP. A description of field QC sample collection guidelines is provided in the field SOPs contained in Appendix B.

In addition, the data for equipment rinse blanks and trip blanks, etc., will be monitored for contamination, and corrective actions will be taken as soon as a problem is identified.

4.2.2 QC SAMPLE PROCEDURES

The number of duplicate and blank samples to be collected are listed in Table 1-1. Sample procedures are specified below and in the field SOP contained in Appendix B.

4.2.2.1 Equipment Rinse Blank Collection

Equipment Rinse Blanks are rinse water samples obtained after the final planned rinsing step for decontamination of bailers, split spoons, lead auger, etc. These blanks demonstrate that the non-dedicated sampling equipment has been thoroughly cleaned and that the sample collection and handling process has not altered the quality of the sample. The general level of the QC effort will be one equipment rinse blank for every 10 or fewer investigative samples. The equipment rinse blank samples will be analyzed for the same list of parameters as the ground water or soil sample with which they are collected.

4.2.2.2 Field Duplicative Collection

The general level of the QC effort will be one field duplicate for every 10 or fewer investigative samples. The field duplicate samples will be analyzed for the same list of parameters as the ground water or soil sample with which they are collected.

4.2.2.3 Matrix Spike/Matrix Spike Duplicate Collection

MS/MSD samples are investigative samples. Soil MS/MSD samples require no extra volume for VOCs or extractable organics. However, aqueous MS/MSD samples must be collected at triple the volume for VOCs and double the volume for extractable organics. One MS/MSD sample will be collected/designated for every 20 or fewer investigative samples per sample matrix (i.e., ground water, soil).

4.2.2.4 Trip Blank Preparation

Trip Blanks are organic free water samples in VOC vials placed in lab chest that are renewed each time a chest is packed or repacked with VOC sample containers. These samples remain

TABLE 1-1
Summary of Sampling and Analysis Program
RFI-Release Assessment
Detroit Coke Corporation
Detroit , Michigan

Location	Matrix	Field Parameters	Laboratory Analysis*	Investigative Samples	Duplicates	Blanks** Eq. Rinse	Blanks** Trip*	MS/MSD	DQO
SWMU 1	Soil	Visual, FID/PID Screening	8240 (BTEX), 8270 (PNAs***)	2-3	1/10	1/10	NA	1/20	I/IV
SWMU 1	Soil	Visual, FID/PID Screening	---	6	NA	NA	NA	NA	I
SWMU 2	Soil	Visual, FID/PID Screening	8240 (BTEX), 8270 (BNAs with pyridine)	3-6	1/10	1/10	NA	1/20	I/IV
SWMU 2	Soil	Visual, FID/PID Screening	---	12	NA	NA	NA	NA	I
SWMU 18	Soil	Visual, FID/PID Screening	8020, BNAs with p &p	1-2	1/10	1/10	NA	1/20	I/IV
SWMU 18	Soil	Visual, FID/PID Screening	---	4	NA	NA	NA	NA	I
SWMU 20	Soil	Visual, FID/PID Screening	8240 (BTEX), 8270 (BNAs with pyridine)	3-5	1/10	1/10	NA	1/20	I/IV
SWMU 20	Soil	Visual, FID/PID Screening	---	11	NA	NA	NA	NA	I
Background Soil	Soil	Visual, FID/PID Screening	8270 (PNAs)	8	1/10	1/10	NA	1/20	I/IV
SWMU 1	GW	---	8240 (BTEX), 8270 (PNAs)	1	1/10	1/10	1/shipment	1/20	IV
SWMU 2	GW	---	8240 (BTEX), 8270 (BNAs with pyridine)	1	1/10	1/10	1/shipment	1/20	IV
SWMU 20	GW	---	8240 (BTEX), 8270 (PNAs)	1	1/10	1/10	1/shipment	1/20	IV
Upgradient Ground Water	GW	---	8240 (BTEX), 8270 (BNAs with pyridine)	2	1/10	1/10	1/shipment	1/20	IV

NA - not applicable

* See Table 7-3 of the QAPP for parameter list.

* * Equipment Rinse and Trip Blanks are aqueous samples and will be analyzed for 8240 (BTEX) only.

***Parameters consist of those indicated with an asterisk in Table 7-3.

Ground water samples will be collected only if ground water is encountered during soil sample collection.

TABLE 11 - 1
PREVENTIVE MAINTENANCE
PROCEDURES AND SCHEDULES

Instrument	Maintenance Procedures/Schedule	Spare Parts in Stock
Gas Chromatograph/ Spectrometer (GC/MS)	1. Replace pump oil as needed. 2. Change septa weekly or as often as needed. 3. Replace electron multiplier as often as needed. 4. Replace gas jet separator as needed. 5. Replace GC injector glass liner weekly or as often as needed. 6. Replace GC column as needed. 7. Check to ensure that gas supply is sufficient for the day's activity.	1. Syringes 2. Septa 3. Various electronic components 4. Glass jet separator 5. GC column 6. Glass liner
Purge and Trap Sample Concentrator	1. Replace trap as needed. 2. Decontaminate the system after running high concentration samples or as required by blank analysis. 3. Leak check system daily and as often as needed. 4. Check to ensure the gas supply is sufficient for the day's activity.	1. Spare traps 2. Spare sparger 3. Various electronic components/ circuits 4. Plumbing supplies-tubing fitting
Photoionization Detector	1. Calibrate at least once per day of use. 2. Recharge one batter pack for each eight hours of field use. 3. Clean detector lamp once per 24 hours of use or more frequently if needed. 4. Change in-line dust filter once for every 240 hours of use or more frequently if needed.	1. Zero air and isobutylene span gas canisters 2. Battery packs and AC outlet. 3. Lint free cloth and methanol 4. Replacement in-line filter

SOIL AND GROUND WATER SAMPLING USING THE GEOPROBE

The geoprobe system of samplers and tools is used for the collection of discreet soil and ground water samples. This system incorporates stainless steel sampling tubes with disposable liners and mechanisms for sample collection at specific depths with the intent to collect soil profile samples with minimal disturbance of the existing conditions and small diameter screens or slotted pipe for the collection of soil vapor or ground water samples.

Several different methods are used to advance the sampling tools to depth. The method used is often dependent on accessibility to the sample location and type of materials being sampled. Sampler advancement can be by impact hammer, hydraulic force or hand driven methods. Sampler extraction most often is by hydraulic force.

LIMITATIONS

Specific site conditions can also limit this method of sampling with the presence of rubble and debris and equipment accessibility problems. Because this method introduces the sampler through the same uncased hole for each sample interval the potential for cross-contamination must be considered.

SOIL SAMPLE COLLECTION AND HANDLING PROCEDURE

All sampling equipment are properly decontaminated before sample collection begins. Samplers incorporate a disposable liner to assist in sample handling and reduce sampler decontamination. Sampler liners are available in several different material composition.

Large Bore Sampler: A 24-inch long x 1-3/8-inch diameter piston-type soil sampler capable of recovering a discrete sample that measures up to 320 ml in volume, in the form of a 22-inch x 1-1/16-inch core contained inside a removable liner.

Liner: A 24-inch long x 1-1/8-inch diameter removable/replaceable, thin-walled inserted inside the Large Bore Sampler body for the purpose of containing and storing soil samples. Liner materials include brass, stainless steel, Teflon, and clear plastic (either PETG or cellulose acetate butyrate).

The assembled Large Bore Sampler is connected to the leading end of a Geoprobe brand probe rod and driven into the subsurface using appropriate methods. Additional probe rods are connected in succession to advance the sampler to depth. The sampler remains

sealed (closed) by a piston tip as it is being driven. The piston is held in place by a reverse-threaded stop-pin at the trailing end of the sampler. When the sampler tip has reached the top of the desired sampling interval, a series of extension rods, sufficient to reach depth, are coupled together and lowered down the inside diameter of the probe rods. The extension rods are then rotated clock-wise (using a handle). The male threads on the leading end of the extension rods engage the female threads on the top end of the stop-pin, and the pin is removed. After the extension rods and stop-pin have been removed, the tool string is advanced an additional 24 inches. The piston is displaced inside the sampler body by the soil as the sample is cut. To recover the sample, the sampler is recovered from the hole and the liner containing the soil sample is removed.

Pilot Hole

A pilot hole is appropriate when the surface to be penetrated contains gravel, asphalt, hard sands, or rubble. Pre-probing can prevent unnecessary wear on the sampling tools. A Large Bore Pre-Probe may be used for this purpose. The pilot hole should be made only to a depth above the sampling interval. Where surface pavement is present, a hole may be drilled with the Geoprobe using a drill steel with a 1.5-inch diameter carbide drill bit prior to probing. For pavements in excess of 6 inches, the use of compressed air to remove cuttings is recommended.

Sample Collection

1. When sampling depth has been reached, position the drive equipment away from the top of the prove rod to allow room to work.

2. Insert an AT-67 Extension Rod down the inside diameter of the probe rods. Hold onto it and place an AT-68 Extension Rod Coupler on the top threads of the extension rod (the down-hole end of the leading extension rod should remain uncovered). Attach another extension rod to the coupler and lower the jointed rods down-hole.

3. Couple additional extension rods together in the same fashion as in Step 2. Use the same number of extension rods as there are probe rods in the ground. The leading extension rod must reach the stop-pin at the top of the sampler assembly. When coupling extension rods together, you may opt to use the GW-469 Extension Rod Jig to hold the down-hole extension rods while adding additional rods.

4. When the leading extension rod has reached the stop-pin down hole, attach the AT-69 Extension Rod Handle to the top extension rod.

5. Turn the handle clockwise (right-handed) until the stop-pin detaches from the threads on the drive head. Pull up lightly on the extension rods during this procedure to check thread engagement.

6. Remove the extension rods and uncouple the sections as each joint is pulled from the hole. The Extension Rod Jig may be used to hold the rod couplers in place as the top extension rods are removed.

7. The stop-pin should be attached to the bottom of the last extension rod upon removal. Inspect it for damage. Once the stop-pin has been removed, the sampler is ready to be re-driven to collect a sample.

8. Reposition the Geoprobe Drawing equipment over the probe rods, adding an additional probe rod to the tool string if necessary. Make a mark on the probe rod 24 inches above ground surface (this is the distance the tool string will be advanced).

9. Attach a drive cap to the prove rod and drive the tool string and sampler another 24 inches. Do not over-drive the sampler.

10. Remove the drive cap on the top prove rod and attach an AT-12B Cap

11. Sampler retrieval can be by hydraulic force incorporating a jacking device or by methods like the Geoprobe vehicle-mounted machine that is designed to both tow and retrieve sampling equipment.

Sample Recovery

1. Detach the 2-foot probe rod it is has not been done previously.

2. Unscrew the cutting shoe using the At-669 LB Cutting Shoe Wrench, if necessary. Pull the cutting shoe out with the liner attached. If the liner doesn't slide out readily with the cutting shoe, take off the drive head and push down on the side wall of the liner. The liner and sample should slide out easily.

3. The ends of the liners can be capped off using the AT-641 Vinyl End Cap for further storage or transportation. A black end cap should be used at the bottom (down end) of the sample core and a red end cap at the top (up end) of the core.

4. On brass, stainless steel, and teflon liners, cover the end of the sample tube with At 640T Teflon Tape before placing the end caps on the liner. The tape should be smoothed out and pressed over the end of the soil core so as to minimize headspace. However, care should be taken not to stretch and, therefore, thin the teflon tape.

5. Large Bore Clear Plastic and Teflon Liners can be slit open easily with a utility knife for the samples to be analyzed or placed in appropriate containers.

6. Large Bore Brass and Stainless steel liners separate into four 6-inch sections. The AT-659K Large Bore Manual Extruder may be used to push the soil cores out of the liner sections for analysis or for transfer to other containers.

Decontamination

Sampling equipment decontamination can be one or a combination of soapy water wash and clean water rinse; steam cleaned, or a solvent wash and clean water rinse, dependent on analytical and cross-contamination concerns.

GROUND WATER SAMPLING PROCEDURE

All sampling equipment will be properly decontaminated before sample collection begins. The objective of this procedure is to drive a sealed stainless steel screen to depth, open the screen, and obtain a water sample via a tubing system to the surface.

Screen Point Ground Water Sampler: The assembled Screen Point Sampler (P/N GW-440K) is 1.0 inch O.D. (outside diameter) x 36-inch overall length. This sampler features a 19-inch screen encased in a perforated stainless steel sleeve. The device is also useful for measurement of piezometric levels.

The assembled Screen Point Sampler threads onto the leading end of a Geoprobe probe rod and is driven into the subsurface using appropriate methods. Additional probe rods are connected in succession to advance the sampler to depth. While the Screen Point Sampler is being driven to the desired sampling depth, it is kept sealed by O-ring connections placed at critical locations on the assembly.

When the desired sampling depth is reached, the sampler is pulled up about 2 feet which disengages the expendable drive point and creates an open borehole from which to sample. The inner core, which consists of a stainless steel sire screen inside of a perforated stainless steel sleeve, is then pushed out into the borehole and water is allowed to enter the sampler and connected probe rods.

In common practice, ground water samples are recovered by pumping or bailing of water collected in the open probe rods. Alternately, tubing from the surface may be connected directly to the sampler screen using a Geoprobe PR (post run) fitting, and samples recovered using a peristaltic pump or vacuum source. The pore size of the screen of this sampler is .0057 inches (0.145 mm). This sampler will allow the user to collect relatively clean water samples in a short time period due to its large surface area.

Sampler Installation

- Drive the water sampler approximately two-foot below the depth level where you want to sample by simply attaching it to Geoprobe rods.
- Never drive the water sampler without the O-ring (P.N GW-445R) attached to the drive point. Failure to use this O-ring may result in flowing soils to clogging the screen during driving.
- Retract the probe rods from the ground a distance of 24 inches (607 mm).
- Insert Geoprobe stainless steel extension rods (P/N AT-67) down the bore of the probe rods. An extension rod coupler (P/N AT-68) must be placed at the bottom end of the lead extension rod in order to protect the threads at the end of this rod. One extension rod will be required for each probe rod in the ground, plus one extension rod for the screen point sampler itself. Place an extension rod handle (P/N AT-69) at the top of the extension rod string.
- When the proper number of extension rods have been coupled together and inserted down the bore of the probe rods, the last extension rod will protrude from the top of the probe rods a distance of approximately 24 inches (607mm).
- Pushing down ton the extension rods should now push the screen out into the formation. When the screen is completely pushed out, the extension rod handle will

come to rest at a final position approximately 3 inches (76 mm) above the top of the probe rods.

- In extreme situations, it may be necessary to tap on the top of the extension rod handle with a hammer in order to force the screen out into the formation.

Ground Water Sample Collection

There are two methods for obtaining a sample from the GW-440 series Screen Point Sampler. Ground water samples can be obtained by bailing or pumping directly from the bore of the probe rods above the screen point. Alternately, a tubing system may be attached directly to the top of the deployed screen and samples pumped to the surface using either a peristaltic pump or other means of vacuum lift.

Sampling Through PRT

"PRT" (post run tubing) refers to a Geoprobe proprietary system of tubing and fittings that are used both for vapor and ground water sampling. This tubing is inserted down the rods after the sampler has already been driven to depth and has been deployed for sampling. The top of the screen point sampler screen is equipped with a PRT fitting which serves as a receptacle for a corresponding PRT adapter fitted onto the end of the sample tubing.

In practice, the tubing with PRT adapter at the lower end is inserted down the bore of the probe rods and screwed into the receptacle on the top of the sampler screen. This procedure forms a vacuum tight sample train from the sampler screen to ground surface.. Sample is normally pumped to the surface using a peristaltic pump or other vacuum source.

The advantage of this method is that the sample is only placed in contact with the stainless steel sampler screen and the sample tubing. The sample is never exposed to a free surface. The disadvantage of this method is that it is limited to maximum ground water depths of 20 to 28 feet (6 to 8.5m) below ground surface.

The following procedures are used to obtain ground water samples using PRT fittings and tubing:

- Either 3/8 inch (9.5 mm) O.D. Teflon (P/N TB-30T) or Polyethylene (P/N TB-25L) tubing may be used for ground water sampling. Selection of tubing material should be based on the analytes of interest and the purpose of the ground water investigation. Each of these tubing's has a corresponding PRT adapter that will be required for this sampling. These adapters are shown in the following table.

TUBING AND PRT ADAPTERS

Tubing	Description	PRT Adapter Part Number
TB-30T	3/8 inch (9/5 mm) TFE	PR-30S
TB-25L	3/8 inch (9.5 mm) LDPE	PR-25S

- Place the barbed end of the appropriate adapter into the selected tubing.
- Push the adapter end of the tubing down the bore of the probe rods until it comes into contact with the PRT threads at the top of the screen point sampler.
- Rotate the tubing counter-clockwise at the surface to screw the adapter in to the screen point threads. Rotate the tubing several revolutions until the down hold adapter is completely seated and the tubing starts twisting. In this condition, the tubing will rotate backwards (clockwise) when released.
- The tubing can now be attached to a peristaltic pump or vacuum source at the surface.
- After sampling is complete, tubing should be removed by pulling it up at the surface. This will pull the tubing off the barbed end of the tubing adapter and will allow the operator to examine the connection at the top end of the screen point when it is pulled from the ground.

Sampler Removal

- Remove all sampling tubing from the bore of the probe rods.
- Pull all probe rods from the ground using the extraction equipment. Care should be taken not to push down on the probe rods during removal.

- Care should be taken to lift the screen point sampler vertically upward at the surface. Pulling the probe rods or sampler from the ground at any direction other than vertical may result in bending of the screen point sampler.

- Dismantle the sampler at the surface and examine if for damage. Decontaminate all parts, replace all O-rings, and reassemble the sampler for the next sample.

Decontamination

In order to assemble the water sampler properly and to take accurate and precise water samples, all parts need to be cleaned thoroughly and, if necessary, individually decontaminated prior to their use. For each test run, fresh, decontaminated sampler parts and O-rings should be used.

All parts should be washed with soapy water. All soil adhering to the parts should be removed by brushing or pressure washing. Finally, all parts should be rinsed with clean, contaminant-free water and allowed to dry before they are assembled.

Check all five O-rings in the sampler assembly for damage and/or wear. For reliable tests, we recommend the use of new O-rings on this tool at each sampling. It is more efficient and cost effective to change O-rings rather than collecting a non-representative sample or invalid data.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

MAR 03 1995

WD-17J

CERTIFIED MAIL Z 411 898 688
RETURN RECEIPT REQUESTED

Paul K. Choinski, Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: Conditional Approval of Detroit Coke Corporation's January, 1995, Revised RCRA Facility Investigation Release Assessment Workplan

Dear Mr. Choinski:

The United States Environmental Protection Agency (USEPA) has reviewed the above-referenced revised workplan and grants conditional approval pending Detroit Coke's satisfactory resolution of the issues found on the enclosed list.

Pursuant to Part III(H)-(B)(2)(a) of each Underground Injection Control permit, you must submit a revised Workplan within 60 days of your receipt of this letter. In this instance, submittal of replacement pages rather than a complete Workplan is acceptable. If you have any questions about the content of this letter or its enclosure, please call Allen Melcer of my staff at (312) 886-1498, or Greg Rudloff at (312) 886-0455.

Sincerely yours,

Richard J. Zdanowicz, Chief
Underground Injection Control Section

Enclosure

bcc: G. Rudloff with encl. (HRPM-8J)
A. Debus with encl. (HRPW-8J)
WD-17J:A.Melcer:am:3/1/95
Document Name: f:\user\allen\dcoke\dc_nod_2.mar

ENCLOSURE

COMMENTS
REVISED RCRA FACILITY INVESTIGATION RELEASE ASSESSMENT WORKPLAN
DETROIT COKE CORPORATION
DETROIT, MICHIGAN
MID 099 114 704

QAPP COMMENTS

QAPP Title Page

1. The word "Detroit" is spelled incorrectly under the signature blank for Paul Choinski.

2.3.2 Ground Water Technical Approach

2. As a point of clarification, groundwater sampling will be performed during the RFI at any unit in which the soil sampling performed during the RFI RA indicates contamination, regardless of whether the physical structure of the unit extends into the water table.

3.6 Level of Quality Control Effort

3. On page 5 of 5 in section 3.6, please revise the QC effort for the equipment rinse blank to no more than one in every 10 or fewer samples. Please also revise the sample network tables (Table 6-1 of the Field Sampling Plan and Table 1-1 in the QAPP) and section 4.2.2.1 to reflect this change.

Table 1-1 Summary of Sampling and Analysis Program

4. Under the column entitled "Laboratory Analysis", the term "8270 PNAs" should indicate that only those compounds marked by a single asterisk in Table 7-3 will be measured and reported when referred to in this fashion.

Table 7-3 Organic Parameters and Detection Limits

5. We suggest that you add the necessary columns to this table to provide the "target levels" which must be attained in order to successfully utilize the data for each intended purpose. For any constituent(s) having intended reporting limits in excess of the target analytical limit(s), please provide a rationale for why such a circumstance would not cause difficulties during the subsequent data assessment phase.

Table 11-1 Preventive Maintenance Procedures and Schedules

6. The Photoionization Detector portion of the "Maintenance Procedures/Schedule" column is missing information. Please correct this table.

APPENDIX B - FIELD SAMPLING SOPS

Earth Tech ES Sampling SOPs

7. The Bottom Check Valve Sampling method for collecting ground water is not acceptable because the up and down oscillations of the tubing with a check valve could lead to a loss of volatiles. Either exclusively use the PRT sampling procedures or propose another method for obtaining ground water samples which will minimize the loss of volatiles from the ground water. If you choose to provide an alternative method, please indicate when each method will be utilized.

Well Casing Volume Calculation

8. The volume of the filter pack should be included when calculating the well volume as was done in the Monitoring Well Sampling With a Bailer SOP.

DRAFT

DETROIT COKE CORPORATION
BOX 09229/DETROIT, MI 48209/(313) 842-6222

December 5, 1994

VIA FACSIMILE TRANSMISSION

Mr. Gregory A. Rudloff
U.S. Environmental Protection Agency
Region V
Waste Management Division
77 West Jackson Blvd. HRP-8J
Chicago, Illinois 60604-3590

RE: PRELIMINARY RESPONSES TO U.S. EPA COMMENTS ON THE RCRA CORRECTIVE ACTION RELEASE ASSESSMENT WORK PLAN PREPARED FOR THE DETROIT COKE CORPORATION FACILITY IN DETROIT, MICHIGAN.

Dear Greg:

The Detroit Coke Corporation and Horizon Environmental have reviewed the U.S. EPA's comments on the RCRA Facility Investigation Release Assessment work plan submitted in July 1994. This letter has been prepared in anticipation of a conference call between the U.S. EPA, Detroit Coke and Horizon Environmental scheduled to occur on December 12, 1994 at 2:00 EST. The conference call has been requested by Detroit Coke so that the preliminary responses to U.S. EPA comments on the RA work plan, summarized in this letter, may be discussed in detail prior to the formal submittal of the revised work plan. The enclosed preliminary responses are intended to promote a clearer understanding of our position on some of the technical issues identified in the U.S. EPA's comment letter. We expect that, if agreement in principle is reached on these issues during our conference call on December 12th, that we will be able to provide a revised work plan to the U.S. EPA that can be approved after this first round of revisions.

GENERAL COMMENTS:

U.S. EPA first stated in their comment letter some general concerns regarding the RA work plan. These included:

- potential difficulty in determining true background values for soil and ground water;

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- the use of a PID as a screening tool may be hampered by interferences; and
- terminology "obviously impacted" is not finitely defined by the work plan.

It is agreed that "true" background values for native soils may be difficult to establish, particularly since the region in which the site is located has been heavily industrialized for over 100 years. Furthermore, most of the heavy industry in the area has, in the past, and continues to have significant air emissions. This activity has most likely produced a significant level of anthropogenic contamination in soil in the region through air deposition of contaminants. Because the deposition of hazardous substances via air emissions (from rolling stock and permitted discharge) is exempt from the definition of a "release" under both state and federal law, and because the air deposition products would clearly not be related to the operations of SWMUs at the facility, it is entirely appropriate that the anthropogenic component of background be incorporated into the development of the site-specific background. Although the incorporation of the anthropogenic component of background into our site-specific background will not provide a description of the chemical characteristics of the native soils in their primeval condition, it does provide a basis for segregating between constituents that are present in soil because they were released from a SWMU and those that are present due to the industrial history of the area.

Regarding your concerns about the presence of coal fines in surficial soils at the site, the work plan currently contains provisions which should reduce the potential for interferences in our background due to this material. First, the area in which our background sample borings will be located was selected during a U.S. EPA visit. It did not evidence significant surficial contamination from coal fines. Second, we have proposed to collect our background samples at the same depth intervals as our foreground samples to assure comparability in soil types and other conditions. Since all foreground soil samples are proposed to be taken at depths greater than two to three feet, the possibility of surficial contamination introducing interferences into our background appears limited. Third, the background data set will be evaluated for statistical outliers prior to the establishment of the site-specific background value (as specified in the MDNR's Verification of Soil Remediation Guidance, April 1994). If a data point is identified as a statistical outlier, it will not be used in the development of a site-specific background.

Development of background ground water quality data will be more straightforward than soil. Ground water moving beneath the site's perimeter from the upgradient direction will be sampled and analyzed to establish background concentration values. The foreground ground water quality (ground water beneath a SWMU) will be compared to the background values to determine whether detected compounds are evidence of a release or representative of a background condition. It seems unlikely, under this plan, that interferences (other than upgradient sources) could corrupt the establishment of representative background ground water values.

The goal of the background sampling program specified for the RA work plan is to establish site-specific values that reflect baseline levels, indicative of both native and anthropogenic components (primarily past industrial activities), of polynuclear aromatic compounds in soil and ground water. It is not the goal of the background sampling program to establish values that reflect the site's condition prior to industrialization of the area 100 years ago. Comparison of the foreground data, collected in the vicinity of a SWMU using a biased methodology, to these baseline background levels, will assist us in identifying releases from the SWMUs. This, after all, is the goal of the RA.

The use of a PID as a field screening tool to measure concentrations of total VOC vapors in soil samples is fundamental to soil quality investigations. Horizon agrees that there are more sophisticated screening tools available; however, for the purposes of this RA, we believe the PID provides a cost-effective and practical method of making determinations in the field of the relative impact in a particular set of soil samples collected near a SWMU. The data yielded from the PID, although not chemical-specific, will provide a very sound technical basis for selecting samples that represent maximum impact in an area for laboratory analysis.

Finally, the terminology "obviously impacted" is an admittedly qualitative determination. It is not intended to be quantifiable. Quantification of impact will be accomplished through laboratory analysis. The term was developed to provide the field investigator with a qualitative threshold which, if exceeded, would result in the cessation of sampling and the referral of the SWMU to the full RFI. For the purposes of the RA, a determination of obvious impact will be made in the field through visual and olfactory observations of the condition of the soil. The term will only be used during the RA as a basis for referring units to a fuller investigation in the RFI. We believe, that for the purposes described in the RA work plan, this terms is sufficiently precise.

It is important to note that most of the U.S. EPA's general comments related to the subjectivity of the qualitative and/or semi-quantitative procedures specified in the RA work. Although the concerns may have some validity under some types of field investigations (e.g. where nature and extent are being defined), we do not believe that they are relevant within the context of a Release Assessment. The objective of the RA is simply to determine whether there has been a release from a SWMU. Each of the qualitative tools discussed above is used to make relative--not absolute--distinctions between samples or SWMUs in the field so that a determination can be made wetter to refer the SWMU to the RFI for further investigation. In no case are we proposing to use these tools to drop a SWMU from further consideration in the corrective action process. That determination will only be made with laboratory analytical data. The relative differences in sample quality between foreground and background, the relative differences between measured PID concentrations; and/or the relative appearance of a sample will, when coupled with a biased sampling scheme focusing on areas most likely to have beenaffected by a release from a SWMU, provide a reliable set of evaluation criteria and yield a reliable determination about the quality of the media in question.

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SPECIFIC COMMENTS:

Prior to preparing a revised work plan it is Horizon's intention through this letter to provide U.S. EPA with a "preview" our proposed responses so that, in general, agreement as to the appropriateness of the responses may be reached thereby expediting U.S. EPA review and approval of the revised work plan. To that end we have either provided the actual response, our concept on how the response will be formulated or requested discussion on the issue or comment in the following pages. Our responses are enumerated in the same sequence as the comments in U.S. EPA's notice of deficiency letter.

1. Yes, however, as mentioned in our response to general U.S. EPA concerns, care will be taken to collect background samples that are representative and the data will be used in such a way as to provide a relative determination regarding impact when comparing foreground samples with background values. *No text revision required.*

2. The term "obvious impact" is a subjective term; it will be determined by the relative appearance, smell, and/or texture of the media being examined (i.e., presence of free product such as oil or presence of coal tar). Quantification of impact will be accomplished through laboratory analysis. The purpose of the term, within the context of the RA, is to establish a threshold beyond which further sampling is precluded and the SWMU is referred for full investigation during the RFI. Under no circumstances will this subjective criteria be used to propose elimination of a SWMU from the RFI. If no obvious impact is apparent at a SWMU, the full sampling and analysis protocols, as outlined in the RA, will be followed to confirm a release has not occurred. We believe that it is reasonable and appropriate to apply this subjective term as a threshold within the context of the RA. *Discussion requested.*

3. A PID measures the total concentration of volatile organic vapors emitted from compounds that occur in the media being screened with an ionization potential less than that of the lamp used by the PID. Generally, a 10.2 or 11.7 eV lamp is used by PIDs. A 10.2 eV lamp is highly sensitive to BTEX compounds and pyridine, which are essentially the indicator volatile organic compounds of interest. For the purposes of the RA, a PID for determination of the relative presence of VOCs in combination with visual and/or olfactory responses for the determination of the relative presence of oil or coal tar will be used to assist in selecting a sample for laboratory analysis. It is not the intention for the PID to specify individual compounds nor to detect a wide variety of compounds. It is the intention that a PID provide a relative response when compared to ambient air concentrations, thereby, indicating that a sample has or has not been impacted and to what relative degree. *No text revision proposed.*

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4. The terminology "presence or absence" was extracted from the Permit requiring corrective action at this facility. Consequently, being a U.S. EPA term, it would best be defined by U.S. EPA to avoid error in an attempting to quantify EPA's intent. *No text revision proposed*

5. Figure 2.2 will be corrected.

6. For the purposes of the RA, background soil samples will be collected from the 2 to 3 foot depth interval. This interval has been selected to be representative of the same soil horizon being sampled at the majority of the SWMUs. The purpose of the background data during the data assessment process, as conveyed in the general comment section of this letter, will be stated in the text of the work plan. The background data will be evaluated statistically, the statistics will be discussed in the report summarizing the findings of the RA.

7. The criteria for determining if analytical data definitively indicate a release will be relevant Act 307 criteria including site-specific background values. *No text revision proposed.*

8. The text is in error, the words "do not" will be removed from the first sentence in Section 2.4.4.

9. Soil cuttings will be returned to the borehole from which they came. If it is determined that the cutting are impacted, that impact will be addressed under the remedial response initiated for the SWMU, thereby eliminating the need for off-site disposal of soils during the RA.

10. *Discussion requested.*

11. Table 6-1 will be revised as appropriate.

12. The title page will be revised to provide a signatory space for the designated Detroit Coke representative.

13. The purpose of identifying background concentrations of PNAs, as conveyed under the general section of this letter, will be more clearly stated under the first bullet of the objectives column in Section 1.4.1 of the QAPP.

14. See response to comment 2 above regarding the definition of "obvious impact". The Field Sampling Plan's description of the procedure for selecting samples from areas that do not exhibit obvious impact based on the results of field screening will be clarified to define no obvious impact as relatively low or no PID response and minor to no staining present. Most impacted will be defined as the sample associated with the highest PID response and/or highest degree of staining observed. If no staining or PID response is observed, the sample selection will be based on proximity to potential release, i.e., shallow samples will

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be selected in an area where overflow is a possibility or samples near observed cracks will be selected etc. If no such bias can be determined, the sample selection will be made randomly. *No text revision proposed.*

15. Section 2.3 of the Project Management Plan provides a lengthy discussion describing the rationale for selection of the indicator parameters. *No text revision is proposed.*

16. It will be possible to import the analytical results of ground water samples into the GRITS data system. However, in the letter (dated September 26, 1994) that accompanied the comments on the RA work plan an "Order" is referenced, additional information regarding this "Order" is requested. *No text revision is proposed.*

17. The text will be revised as requested.

18. The text will be expanded as requested.

19. As stated in the text, independent data validation will be provided by the Earth Tech RA Laboratory Project Manager and the Earth Tech RA QA director as has been approved by U.S. EPA in previous QAPPs. *Additional discussion on this issue is requested.*

20. In most cases data generated during the RA are expected to be comparable to data that will be generated during the RFI. As discussed in the text of the RA work plan, to the extent that the data collection objectives and analytical methods are similar, the resulting data will be comparable. *No text revision is proposed.*

21. The confusion concerning the proposed frequencies of the various blank samples arises from a discrepancy on our part concerning the definition of equipment rinse blanks and field blanks. The intent of the work plan is to propose sampling of equipment rinse blanks at a frequency of 1/20 samples; field duplicate samples at a frequency of 1/10 samples; trip blanks at a frequency of 1 per shipment of aqueous samples (for VOCs only) and MS/MSDs at a frequency of 1/20 samples. No field blanks (also known as atmospheric blanks) as defined in the Earth Tech SOP included in the Appendix B of the work plan, are proposed. Although atmospheric deposition should not be overlooked at the site, it is not expected to have a significant effect on results of the RA considering the nature of expected ambient air and intended use of the RA data, i.e. comparison to relevant Act 307 criteria. The work plan will be revised in every relevant section, table, and appendix to clarify the blank definitions and to specify the frequencies presented here.

22. The laboratory will use precleaned bottles, certified by I-Chem. Further comments will be made pending discussion with the EPA.

23. The requested text revision will be made.

24. See the response for comment 21, above.

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25. Sample extracts are signed out by the chemist performing the analysis and subsequently signed in when the samples are returned to the freezer.

26. The reference to page 2 of 2 in Section 6.0 relates to GC analyses. Only GC/MS analyses will be done for this project. The section in Section 6 can be removed from the QAPP.

27. Further discussion will be required during the call to the EPA.

28. The frequency of data validation will be specified in the text.

29. The Section (2.12) reference is incorrect it will be revised to 3.0. Section references in the QAPP will specify the document if it is not within the QAPP.

30. The final data deliverables will be presented in a "CLP-like" deliverables format.

31. A comment to include the inspection of typical data packages will be included in this section.

32. Table 11-1 will be expanded to include applicable preventative maintenance items for the PID.

33. The text will be revised to reflect the comment.

34. Although the number and type of samples to be collected during the RA has not been definitively established an accurate estimate has been made (Table 1-1 of the QAPP). The statement introducing Section 13.1 is predicated upon that estimate. Because, as with most environmental quality investigation, flexibility and field discretion in sample collection is imperative, (given the unknown conditions that may be encountered in the subsurface) it is difficult to restrict the investigation, and perhaps not consistent with the objectives of the investigation, by defining exactly the number of samples to be collected while maintaining the intent of the investigation. *No text revision is proposed.*

35. This section will be re-written to be more specific in naming the circumstances in which corrective actions will be made.

36. U.S. EPA will be requested to approve the use of another laboratory in the event this is contemplated. *No text revision is proposed.*

37. Table 1-1 will be revised in accordance with this comment.

38. The percent RSD will be changed to 30%. All target analytes are normally included in the 5 point curve.

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39. Method 8240 will be used. The actual names of the SOPs to be used are found in Table 7-1.

40. Internal standard area and retention time criteria will be added to Table 6-1 in the form of footnotes.

41. Comment needs to be discussed further with the EPA. Target criteria are fully defined under Act 307, although there are provisions for establishing alternate health-based criteria based upon risk assessment procedures. The possibility of encountering interferences from wide spread contamination is acknowledged. If this is the case for ground water it is likely that the data will show us that the health-based limits are exceeded regardless of whether or not the analysis achieves a detection limit near the health-based limit. I may instances the analytical method detection limits specified by Act 307 do not approach the health-based limit, in these instances the criteria then defaults to the method detection limit itself. *No revision is proposed..*

42. Comment needs to be discussed further with the EPA. This situation will be considered prior to specifying analytical procedures for the RFI. Currently it is speculative and beyond the objective of the RA to necessitate "sample cleanup" during the RA. *No revision is proposed.*

43. The objective of the RA is to investigate identified SWMUs to determine if there has been a release. Currently no field analytical procedures are contemplated for the RA to assist in determining the source of obvious impact primarily because it will likely be assumed to be, if present, associated with the SWMU being investigated. *No revision proposed.*

44. The method detection limits specified in table 7-3 are consistent with Act 307 recommended MDLs. The four VOC being evaluated during the RA are, as described in the text, "indicator parameters" and may be regarded as noncomprehensive relative to the list of parameters that may be identified by method 8240. *No revision proposed*

45. Table 7-3 was complete for all matrices and parameters to be tested in the original plan. All reporting limits meet the objectives of Act 307. *No revision proposed.*

46. The rationale for selection of the indicator parameter list is provided in Section 2.3 of the Project Management Plan. *No revision proposed.*

47. Pentchlorophenol is not a target analyte for this project. *No revision proposed.*

48. Error, Table 7-3 will be revised to eliminate the duplicate listing of fluorene.

49. Table 7 of the 8270 SOP was written six months prior to the Detroit Coke QAPP. The limits currently employed by Earth Tech's laboratory are different from those listed in the

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QAPP. Because the lab updates its limits every 4-6 months, both the QAPP and SOPs state that the number presented are subject to change.

50. through 58. Discussion on each issue is requested during the conference call. It is Earth Techs position that the comments are not applicable for SOPs that are already approved by U.S. EPA for use.

59. The reference to footnote 1 is an error. The superscript "1" shown above "low soil/sediment" will be removed from the 8270 SOP.

60. See response to comments 50-58.

61. See response to comments 50-58.

62. An SOP for sampling with a Geoprobe will be included.

63. through 66. The SOPs will be revised in accordance with the comments.

We look forward to discussion of the comments and our proposed responses on December 12, 1994 at 2:00 EST.

Sincerely,

Paul K. Choinski
Facility Manager
on behalf of Detroit Coke Corporation

cc: Allen Reilly, Horizon
Paul Choinski, Detroit Coke
Tim Love AlliedSignal
Mark Kamholz, Tonawanda Coke

NOV 04 1994

WD-17J

CERTIFIED MAIL P-851-380-820
RETURN RECEIPT REQUESTED

Paul K. Choinski, Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: Notice of Deficiency Regarding Detroit Coke Corporation's July, 1994, RCRA Facility Investigation Release Assessment Workplan

Dear Mr. Choinski:

The United States Environmental Protection Agency (USEPA) has reviewed the above-referenced workplan and finds the general structure and technical approach outlined in the workplan to be satisfactory. We do, however, have concerns about some aspects of the Release Assessment (RA) work which are likely to pose problems during the RCRA Facility Investigation (RFI) stage of your RCRA corrective action work as well.

We are concerned that true background values for both soil and groundwater quality will be difficult to establish at the Detroit Coke facility. There may be substantial deposits of coal fines in the vicinity of the proposed sample locations rendering representative native soil and groundwater difficult to obtain. Further, the use of a photo-ionization detector (PID) as a means to detect various organic molecules may be inadequate to discern between the organic chemicals of interest and may be hampered by interferences of certain organic molecules. Lastly, the means by which samples will be identified as having been "obviously impacted" and thus sent for further analysis should be better defined. An alternate field screening method may be better able to determine if a sample has suspect contaminants and thus more reliably resolve the question as to which samples should be sent to a laboratory for further analysis, as well as more reliably determine that a representative background sample has been obtained.

The USEPA's specific comments on the RFI RA Workplan are enclosed. Approval of the workplan cannot be given until these comments are adequately addressed. Pursuant to Part III(H)-(B)(2)(a) of each Underground Injection Control permit, you must

submit a revised Workplan within 60 days of your receipt of this letter. If you have any questions about the content of this letter or its enclosure, please call Nathan Wiser of my staff at (312) 353-9569, or Greg Rudloff at (312) 886-0455.

Sincerely yours,

Richard J. Zdanowicz, Chief
Underground Injection Control Section

Enclosure

bcc: G. Rudloff/without encl. (HRPM-8J)

WD-17J:N.Wiser:nw:10/28/94
Document Name: f:\user\nwiser\corresp\fy95\dc_nod_ra.oct

11/3/94 11/9/94 NW 10/28/94 FH 11/3/94 11/4/94 11/4/94

5555 Glenwood Hills Parkway, SE, Post Office Box 874, Grand Rapids, Michigan 49588-0874

August 19, 1994

Mr. Gregory A. Rudloff
U.S. Environmental Protection Agency
Region V; Waste Management Division
77 West Jackson Blvd.
Chicago, IL 60604-3590

Telephone
616.942.9600
Facsimile
616.942.6499

Dear Greg:

Enclosed are two copies of the *RCRA Facility Investigation-Release Assessment* work plan prepared for the Detroit Coke Corporation, Detroit, Michigan. The work plan has been prepared in accordance with Detroit Coke's Underground Injection Control Permit Number MI-163-1W-0004, which became effective on April 24, 1994.

As we discussed during our June 30, 1994 meeting at the facility, the RA will be used to determine whether, and to what extent, corrective measures, will be necessary at the site. Bearing in mind that the site has been used intensively for industrial activities over approximately the last century, the standards for determining if corrective measures are necessary should be based on current and reasonable foreseeable future uses of the property, as well as an understanding of the regional land use and available site access restrictions.

It is Detroit Coke's intent to move through the Corrective Action process as expeditiously and cost effectively as possible. In light of this, U.S. EPA review of the RA work plan is critical to the implementation schedule. As was also mentioned during our recent meeting, we feel that the proposed biased screening approach for determining if a release has occurred at a particular SWMU may best be achieved if not hindered by extreme winter conditions. Consequently, to avoid inclement weather, we feel that U.S. EPA approval of the RA work plan is needed prior to November 1, 1994 to allow implementation during the 1994 season.

Detroit Coke will be maintaining a proactive posture throughout the Corrective Action process and would like to be made aware of the progress of your review and get an early indication of Agency acceptance of the technical approaches proposed by the plan. We invite you to contact us whenever you think we will be able to assist in clarifying an issue or in expediting the process.

Questions and/or comments may be directed to Mr. Paul Choinski at Detroit Coke (313) 842-6222 or to me at (616) 940-4421.

Sincerely,

EARTH TECH

Craig A. VandenBerge
Technical Manager

CAV/mrc

DETROIT COKE CORPORATION
BOX 09223/DETROIT, MI 48209/(313) 842-6222

August 15, 1994

Mr. Stephen G. Buda
Chief, Hazardous Waste Permits Waste Management Division
Michigan Department of Natural Resources
Ottawa Building South
P.O. Box 30241
Lansing, Michigan 48909

Reference: **RCRA Corrective Action at Detroit Coke Facility (MID 029-114 704)**

Dear Steve:

We enjoyed meeting you at the U.S. EPA Region V RCRA Corrective Action Roundtable and hearing your views on how the program could be improved. We share many of your concerns regarding program implementation, particularly the disincentives to voluntary action, and the Agency's emphasis on procedure over end results. We are committed to working with you and the U.S. EPA in a constructive manner to make some positive changes in the program.

The purpose of this letter is to inform you of the status of the corrective action program at the Detroit Coke facility. We write this letter in the spirit of openness and cooperation that was generated at the roundtable and also to inform you of the discussions that took place at a recent meeting with the U.S. EPA.

As you may be aware, Detroit Coke has a permitted Class I Hazardous Injection Well at its facility. The permit, which was effective April 24, 1994, incorporates a compliance schedule for implementing corrective action at 13 SWMUs at the facility, beginning with a release assessment to determine whether there have been any releases from these units. We met recently with Greg Rudloff and Allen Melcer from the U.S. EPA Region V office to kick-off corrective action at our facility. During the course of our conversations, we asked Greg and Allen about coordination with the MDNR and discussed the effect that the impending

delegation of the corrective action program to the State of Michigan may have on how the process is implemented at our facility. Although not entirely clear at this point, Greg and Allen suggested that it was likely that the U.S. EPA would maintain the lead role on the facility's corrective action even after delegation of the program to the MDNR since it is being administered through an UIC permit, a program for which the MDNR does not have authority. Given this arrangement, we inquired how coordination with the MDNR would be achieved during the course of corrective action process at the facility. This issue is important to us since the MDNR's concurrence at the early stages of the corrective process will assure that second guessing and redundant regulatory oversight are minimized later in the process. Greg and Allen stated that you were copied on all correspondence but thought it likely, that you would conduct independent reviews of work plans and reports during the course of corrective action. They suggested that no formal arrangement or coordination agreement was necessary between the agencies to assure that the program is implemented in a manner which satisfied both the U.S. EPA and the MDNR.

Given these discussions, we want to assure you that we intend to implement corrective action at our facility in a manner which conforms to MDNR rules and guidance. We also want to invite you to write or call us directly should you have any questions on the work plans and reports that are forwarded to you by the U.S. EPA (we will also copy you on any correspondence that we generate during the course of the corrective action process). Our desire is to satisfy our corrective action obligations in the most cost-effective and expeditious manner possible by working with both the MDNR and the U.S. EPA in a cooperative manner. Detroit Coke intends to implement corrective action requirements at its facility in a manner that simultaneously satisfies all relevant agencies and regulatory authorities. We would appreciate any help or advice you can give us in this regard and are open to suggestions from your office on how best to achieve our objectives.

Please feel free to contact us at any time.

Sincerely,

Paul Choinski

Paul Choinski
Behalf of Detroit Coke Corporation

c: Allen Melcer, U.S. EPA UIC Section
Greg Rudloff, U.S. EPA Waste Management Section

WD-17J

CERTIFIED MAIL P-851-380-820
RETURN RECEIPT REQUESTED

Paul K. Choinski, Facility Manager
Detroit Coke Corporation
P.O. Box 09229
Detroit, Michigan 48209

Re: Notice of Deficiency Regarding Detroit Coke Corporation's July, 1994, RCRA Facility Investigation Release Assessment Workplan

Dear Mr. Choinski:

The United States Environmental Protection Agency (USEPA) has reviewed the above-referenced workplan and finds the general structure and technical approach outlined in the workplan to be satisfactory. We do, however, have concerns about some aspects of the Release Assessment (RA) work which are likely to pose problems during the RCRA Facility Investigation (RFI) stage of your RCRA corrective action work as well.

We are concerned that true background values for both soil and groundwater quality will be difficult to establish at the Detroit Coke facility. There may be substantial deposits of coal fines in the vicinity of the proposed sample locations rendering representative native soil and groundwater difficult to obtain. Further, the use of a photo-ionization detector (PID) as a means to detect various organic molecules may be inadequate to discern between the organic chemicals of interest and may be hampered by interferences of certain organic molecules. Lastly, the means by which samples will be identified as having been "obviously impacted" and thus sent for further analysis should be better defined. An alternate field screening method may be better able to determine if a sample has suspect contaminants and thus more reliably resolve the question as to which samples should be sent to a laboratory for further analysis, as well as more reliably determine that a representative background sample has been obtained.

The USEPA's specific comments on the RFI RA Workplan are enclosed. Approval of the workplan cannot be given until these comments are adequately addressed. Pursuant to Part III(H)-(B)(2)(a) of each Underground Injection Control permit, you must

submit a revised Workplan within 60 days of your receipt of this letter. If you have any questions about the content of this letter or its enclosure, please call Nathan Wiser of my staff at (312) 353-9569, or Greg Rudloff at (312) 886-0455.

Sincerely yours,

Richard J. Zdanowicz, Chief
Underground Injection Control Section

Enclosure

bcc: G. Rudloff/without encl. (HRPM-8J)

WD-17J:N.Wiser:nw:10/28/94
Document Name: f:\user\nwiser\corresp\fy95\dc_nod_ra.oct

ENCLOSURE

COMMENTS
RCRA FACILITY INVESTIGATION RELEASE ASSESSMENT WORKPLAN
DETROIT COKE CORPORATION
DETROIT, MICHIGAN
MID 099 114 704

I. Project Management Plan

2.3.0 Technical Approach - Release Indicator Parameters

1. Is it thought that background samples will also reflect the presence of analytical interferences possibly attributable to the presence of coal fines and air deposition products?

2.3.1 Soil Technical Approach - Field Screening

2. Here and throughout the QAPP and RA Workplan, the term, "obvious impact" must be clearly defined procedurally and, to the greatest extent possible, in quantitative terms.

3. It should be stated what compounds the PID will be able to detect and their detection limits in order to evaluate whether this will be an appropriate screening method for samples. Alternately, other screening methods should be considered that will be able to detect a greater number of the chemicals of concern.

2.3.2 Ground Water Technical Approach - Background Ground Water Sampling and Analysis

4. The term, "presence or absence", must be clearly and quantitatively defined. Will this determination be made regardless of whether groundwater samples are collected near SWMUs?

2.4.2 Background sample Collection and Analysis - Soil

5. Although it is stated that 8 soil locations have been selected, apparently, 9 soil background sampling locations are indicated in Figure 2.2.

6. There should be at least 4 background (soil) samples, representing each distinct soil horizon. The purpose of the soil background data during data assessment should be stated. Will this data be statistically evaluated and compared to other investigational areas?

2.4.2 Background sample Collection and Analysis - Ground Water

7. The criteria to be used to determine whether analytical results from foreground samples definitely indicate a release should be quantified.

2.4.4 Rationale of Selected Sample Locations

8. There are apparent contradictions concerning the references to "obvious impact". In one possible instance, when field screening results do not indicate obvious impact, 20% to 30% groundwater and/or samples will be submitted to the laboratory. In another hypothetical instance, if no obvious impact is evident, 50% groundwater and/or soil samples will be submitted to the laboratory. Was it intended to refer to "obvious impact", instead of "no obvious impact", in the latter instance?

II. Field Sampling Plan:

6.3.1 Temporary Ground Water Monitoring Well Installation and Development

9. Any impacted drill cuttings should be properly disposed of.

6.3.2 Ground Water Sample Collection

10. Groundwater turbidity, and dissolved oxygen content should be measured during the well purging procedure as a means of indicating groundwater "stabilization", prior to sampling. (See page 127 of SW-846, Chapter 11, 3rd edition, October, 1991.)

Table 6-1 - Summary of Sampling and Analysis Program

11. Table 6-1 should be revised per the comments provided concerning the analogous table appended to the QAPP.

III. Quality Assurance Project Plan

12. The title page of the QAPP requires a signatory space for the designated Detroit Coke representative.

1.4.1 Specific Objectives and Associated Tasks

13. There is indication that PNAs will be analyzed in background samples. Although left unstated, it is presumed that the purpose will be to either identify the concentrations of PNAs which are either naturally occurring, or which have resulted from the site's operational history, although unaffected by discrete SWMUs. The purpose of the basis for collecting PNAs samples in background locations should be stated more specifically.

14. The term "obvious release" must be defined procedurally and quantitatively with respect to soil sampling that is planned. Also, how will the "most impacted" areas be discerned when no obvious impact is observed?

1.4.2. Project Target Parameters and Intended Data Usages

15. The rationale for why there are so few VOCs constituents included in the facility target parameter list should be fortified. Conversely, the list of VOCs should be increased to include all of the hazardous constituents indicated in Table 1A of the "8240SOP" found in Appendix A, because this is the list of constituents for which the method has been validated for.

1.5 Sample Network Design and Rationale

16. Will it be possible to import the groundwater data that is generated in DMS format into GRITS format?

2.0 Project Organization and Responsibility

17. The laboratory address(es) to which samples will be shipped during the RA should be stated in section 2 of the QAPP.

2.2 Management Responsibilities

18. The discussion of duties for the Earth-Tech RA Project and Technical Managers is rather noninformative. This section should identify or speculate further on the possible range of duties for these individuals, instead of simply stating that a number of their duties will be directly delegated by the Detroit Coke RA Manager.

2.4 Laboratory Responsibilities

19. Who will be responsible for performing independent data validation?

3.5 Comparability

20. Referring to section 3.5 of the QAPP, will data generated during the RA be comparable to data generated during the RFI?

3.6 Level of Quality Control Effort

21. Table 1-1 indicates a 1/20 frequency for field blanks. The 1/10 ratio specified in the second paragraph on this page for the equipment rinse blank is actually preferred.

4.2.1 Obtaining Contaminant-Free Sample Containers

22. The specific use of the referenced document should be tailored to specific constituents of concern for this project and target levels which should not be exceeded for PNAs, BTEX, and BNAs in order to meet pertinent project objectives.

23. The set of potential corrective actions briefly described in section 4.2.1 should be moved to section 13 of the QAPP.

4.2.2 QC Sample Procedures

24. How are field blanks and equipment rinse blanks respectively defined and what are the frequencies of collection.

5.2 Laboratory Custody Procedures

25. How are sample extracts, (e.g. BNAs and PNAs) handled under laboratory chain of custody?

6.2 Laboratory Instrument Calibration

26. In Table 6-1, it is stated that CCV will be <25%, as performed every 12 hours. On page 2 of 2 in section 6.0, the criteria is within plus or minus 15%, as performed every 10 samples. Then, the ICV criteria is 20% D. Please clarify the relationships between the 3 criteria, and as they will be addressed procedurally.

7.2.2 List of Associated QC Samples

27. It is stated that "no specific compounds have been identified as chemicals of concern". However, specific compounds of concern are identified in the target parameter list. Therefore, the matrix spiking solutions should be customized to the extent possible such that data of known quality and optimal reliability can be generated for this project.

9.2 Data Validation

28. Independent data validation should also be performed at a 100% frequency.

9.2.2 Procedures Used to Validate Lab Data

29. There is a reference to a section 2.12 in section 9.2.2, page 3 of 4, of the QAPP. However, it is unclear which document this section 2.12 is contained in.

9.3.2 Laboratory Data Reporting

30. There are references to calibration verification of blanks in this section. However, procedures for initial and continuing calibration, which are discussed procedurally in

the SOPs contained in Appendix A, should also be itemized. Blank data results should also be part of the final report (i.e. not just " calibration verification of standards and blanks"). It should be mentioned under section 9.3 that the final data deliverables should be in a "CLP-like" deliverables format.

10.2.2.3 Overview of the External Lab Audit Process

31. Inspection of "typical" data deliverables packages should also be included in this section.

11.1 Field Instrument Preventative Maintenance

32. Preventative maintenance items, mentioned in section 11.1, for field activities should be tabulated.

13.0 Corrective Actions

33. It is mentioned that an individual in the U.S. EPA's QAS will be notified, actually, initial contact should first be made with Greg Rudloff or Nathan Wiser, both of U.S. EPA.

13.1 Field Corrective Action

34. Given that the number and types of samples to be taken, as proposed in the RA plan has not been definitively established, the statement introducing section 13.1 loses significance. An effort should be made to decide exactly how many samples shall be taken, and then modify the procedure via the corrective action mechanism if modifications become necessary.

13.2 Laboratory Corrective Action

35. This section in the QAPP should refer to some specific circumstances which may have the effect of triggering corrective action. For example, see sections 6.6.3, 6.6.5 and 6.3 of method "8270SOP", and section 8.1.2.1 of "8240SOP", and, for the latter method, situations when the %D criteria for CCC response factors are exceeded for the daily calibration check.

13.3 Corrective Action During Data Validation and Data Assessment

36. It should be noted that another laboratory may not be used without written approval of the U.S.EPA. (Switching laboratories for any purpose may not be engineered through a simple corrective action procedure.)

Table 1-1 - Summary of Sampling and Analysis Program

37. References to "8270 (BNAs plus pyridine)" and "8270 (PNAs)" seem incongruous because PNAs are classified as

"base/neutrals". In the "MS/MSD", "Duplicates", and "Field Blanks" columns, the actual number of samples should be stated, not simply the frequency of collection. Ranges of samples should not be indicated in the "Investigative Samples" column, a matter which may have to be reconciled with page 19 of 21 in the PMP. The depths at which samples shall be taken should be reflected in Table 1-1. It is not entirely clear why there are 2 rows for SWMUs 1 through 8 in both the "Matrix" and "Field Parameters" columns. Is it intended to take samples for VOA analyses if background areas are "obviously contaminated"?

Table 6-1 - Instrument Calibration

38. For initial calibration, the % RSD should be < 30% for calibration check compounds, (and, for both methods 8240SOP and 8270SOP, all target analytes should be included in the 5 standards).

39. Under the "Method Reference" column, which method, 8240 or 8260, will be used? Actually, the method reference should directly identify names of the SOPs proposed for use.

40. For internal standards, the retention times should be within plus or minus 30 seconds from the previous calibration and their area must be -50% to + 100%. (e.g. see section 9.4 of the "8270SOP".) Other similar and analogous qualitative identification criteria also exist for the volatiles to be determined by the "8240SOP". Such criteria should be added to Table 6-1, possibly in the form of footnotes.

Table 7-1 - Analytical Methods

41. Method selection should be deferred until after the target criteria (e.g. Act 307 criteria) have been fully established. Given the potential for encountering widespread contamination and resulting analytical interferences, it may be difficult to achieve sensitivities for this RA near health based limits for groundwater for certain target analytes.

42. Although two extraction procedures have been identified in Table 7-1 for the soil and water matrices respectively, it may be absolutely necessary to employ more rigorous cleanup procedures, given that the site could be extensively contaminated both with coal dust fines as well as ample amounts of TPH. For instance, it may be necessary to perform gel permeation chromatography on soil samples prior to analysis. Once the project objectives have been more rigorously defined, it should be possible to evaluate the extent to which sample cleanup must be performed to remove analytical interferences in samples to be analyzed for PNAs and BNAs.

43. Table 7-1 does not reflect analytical procedures to be performed in the field. It may be necessary to consider the addition of field tests to supplement the performance of any field headspace tests performed on soil samples to more reliably characterize the sources of "obvious contamination". However, this strategy must be reconciled and coupled with the nature of the overall project objectives.

Table 7-3 - Organic Parameters and Detection Limits

44. The method detection limits based on a 5 mL purge for the groundwater matrix may be insufficiently high for certain target parameters if the project purposes include comparison to health based values. Also, until a more effective rationale is presented, the list of 4 VOCs must be regarded as noncomprehensive since it is possible to analyze many other VOCs using the "8240SOP".

45. An unresolved issue concerns how the proposed reporting limits found in Table 7-3 compare to the target levels that are required for this project? Table 7-3 must be supplemented with two additional columns comparing these target limits with the proposed reporting limits for all media to be sampled. For all instances where an Act 307 or other relevant limit cannot be attained, there must be rationale presented for why it may not be necessary (or even impossible) to achieve the target limit.

46. It is unclear why data for all semivolatile constituents found in Table 7-3 won't be reported for all 4 SWMUs. Method "8270SOP" is capable of being used for all the semivolatile constituents found in Table 7-3.

47. Method "8270SOP" provides relatively high reporting limits for pentachlorophenol in groundwater. However, there are other methods that will allow analysis of this constituent to lower levels more comparable with the human health 1/1,000,000 risk of 0.7 ppb. The rationale for why certain target levels may or may not be achieved must be explored further.

48. Why is the compound, fluorene, listed twice in Table 7-3?

Table 8-1 - Method Specific Data Quality Objectives Matrix Spike and Duplicate Control Limits

49. Please clarify why the stated criteria differ slightly from the "windows" expressed in Table 7 of 8270SOP? Also, are the values expressed in the "Precision" column intended to be in RPD? What does footnote (1) refer to? Why doesn't the criteria for VOCs match that provided in Tables 11 and 12 of 8240SOP more closely?

Table 8-2 Method Specific Data Quality Objectives Surrogate Compound Percent Recovery Control Limits

50. The ranges seem rather low for 8240 surrogates. Also, what is the rationale for not using 1,2 dichloroethane as an 8240SOP surrogate? Table 10 of method 8240SOP should be referenced in this table. Why is it that surrogates for semivolatiles do not exactly coincide with Table 6 in 8270SOP?

Appendix A - EPA Method 8240

51. Table 6-1 references 8260, but "8240SOP" is apparently based on U.S.EPA methods 8240 and 624.

52. There are two possible ion traps for 8240SOP. Which one will be utilized for the Detroit Coke RA?

53. Tables 2A and 2B list Act 307 "ODLs", Operating Detection Limits. It should be explained in the QAPP how these particular criteria would apply to the Detroit Coke RA.

54. In a previous external audit conducted at the WWE Grand Rapids facility, it was determined that the 50 ppb level for acetone and other ketones in groundwater was an excessively high reporting limit. For the Detroit Coke RA, this level should be reduced to 10 ppb.

55. For the 8240SOP, the lowest internal standard for initial calibration is significantly higher than some of the Act 307 or other health based limits which may be pertinent to the project. This issue awaits further discussion following elaboration/clarification of the project objectives.

56. Especially if high VOCs concentrations are anticipated to be found in soils, the methanol extraction procedure may yield more accurate data than would be possible using the heated purge and trap, although at the expense of higher detection limits. This matter should be considered during reformulation of the project objectives.

57. In section 11.2.3, it is stated that the standard deviation of the blank would be subtracted in the process of performing an MDL study. Subtraction of blank concentrations will not be allowed for the Detroit Coke investigational samples.

58. References to internal standards indicated in the fifth column of Table 1 of the 8270SOP are not specifically related to actual internal standards.

59. In Table 2 of 8270SOP, where is footnote 1?

60. Referring to section 4.0 of the 8270SOP, which GC/MS system will be used for the Detroit Coke RA, the Extrel or the Saturn?

61. Referring to section 8.1.5 of the 8270SOP, will tentatively identified compounds be reported for this investigation?

Appendix B - Earth Tech ES Sampling SOPs

62. An SOP for sampling using a geoprobe should be included.

Appendix B - Monitoring Well Sampling With a Bailer

63. The volume of the filter pack should be included when calculating the volume of water to be purged.

64. The procedure of taping a sample bottle lightly, and filling it further if bubbles appear should be eliminated since it could lead to a loss of VOCs.

Appendix B - Well Casing Volume Calculation

65. The volume of the filter pack should be included when calculating the well volume.

Appendix B - Jar Head Space Measurements in Unsaturated Soil Samples

66. The suitability and limitations of the 2 detectors specified in the Earth Tech SOP A-34 should be discussed in relation to the list of volatile target constituents which will be measured in the field.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

DATE: October 18, 1994

SUBJECT: Screen Review of Draft QAPP for Detroit Coke' Release Assessment; MID099114704

FROM: Allen A. Debus, RPB QAPP Coordinator

TO: Greg Rudloff, MI Section

Per your request, I have screened the QAPP mentioned above. My comments are indicated on the attachment. After review, please disseminate these concerns to the Detroit Coke representative at the earliest opportunity. It may also be worthwhile to discuss the issues at a conference call or meeting. If you have any further questions or comments, please do not hesitate to contact me at 6-6186. This file is accessible via the LAN at f:\user\share\rudloff*.*, file name "Detroit.1".

cc: George Schupp, QAS
Dennis Wesolowski, CASS

COMMENTS CONCERNING DRAFT QAPP FOR DETROIT COKE OF

DETROIT, MICHIGAN; MID099114704

I. Project Management Plan:

1. p. 12 of 21, last paragraph; Is it thought that background samples will also reflect presence of analytical interferences possibly attributable to presence of coal fines and air deposition products?

2. Section 2.3.1; Here and throughout the QAPP and RA Workplan, the term, "obvious impact" must be clearly defined procedurally and, to the greatest extent possible, in quantitative terms.

3. page 15 of 21, section 2.3.2; The term, "presence or absence", must be clearly and quantitatively defined. Will this determination be made regardless of whether groundwater samples are collected near SWMUs? Has a "hot spot" screening strategy been designed for the RA?

4. page 17 of 21, section 2.4.2; Although it is stated that 8 soil locations have been selected, apparently, 9 soil background sampling locations are indicated in Figure 2.2.

5. Section 2.4.2; There should be at least 4 background (soil) samples, representing each distinct soil horizon. Of what purpose will soil background data be during data assessment? Will this data be statistically evaluated and compared to other investigational areas without consideration of other "action" or health-based criteria?

6. page 19 of 21, section 2.4.4; There are apparent contradictions concerning the references to "obvious impact". In one possible instance, when field screening results do not indicate obvious impact, 20% to 30% groundwater and/or samples will be submitted to the laboratory. In another hypothetical instance, if no obvious impact is evident, 50% groundwater and/or soil samples will be submitted to the laboratory. Was it intended to refer to "obvious impact", instead of "no obvious impact", in the latter instance?

II. Field Sampling Plan:

1. Section 6.0; Does this soil sampling procedure adequately reflect the purpose of the sampling event? (e.g. "hot spot" screening to define "release", versus efforts to define the horizontal and vertical extent of contamination near the limits of risk based, low concentration levels) The procedure proposed for soil sampling, through use of a split spoon sampling device, will not minimize loss of VOCs during soil sampling. Is this circumstance a matter of concern given the nature of the project objectives, (once they become more clearly expressed in a revision to this QAPP.)

2. Section 6.3.1; Should further testing be required to determine whether drill cuttings pass the TCLP criteria?

3. Section 6.3.2; Groundwater turbidity, and dissolved oxygen content should be measured during the well purging procedure as a means of indicating groundwater "stabilization", prior to sampling. (See page 127 of SW-846, Chapter 11, 3rd edition, October, 1991.)

4. Section 6.3.2; Bailers should not be used to sample VOCs. Detroit Coke should propose an alternate procedure which will minimize loss of VOCs to the atmosphere, unless excessive losses will not adversely impact Detroit Coke's capability to attain pertinent project objectives.

5. Table 6-1 should be revised per the comments provided concerning the analogous table appended to the QAPP.

III. QAPP

1. The title page of the QAPP requires a signatory space for the designated Detroit Coke representative.

2. Referring to page 5 of 10 in section 1.4, there is indication that PNAs will be analyzed in background samples. Although left unstated, it is presumed that the purpose will be to either identify the concentrations of PNAs which are either naturally occurring, or which have resulted from the site's operational history, although unaffected by discrete SWMUs. The purpose of the basis for collecting PNAs samples in background locations should be stated more specifically.

3. On page 6 of 10 in section 1.4, the term "obvious release" must be defined procedurally and quantitatively with respect to soil sampling that is planned. Also, how will the "most impacted" areas be discerned when no obvious impact is observed?

4. The rationale for why there are so few VOCs constituents included in the facility target parameter list should be fortified. Conversely, the list of VOCs should be increased to include all of the hazardous constituents indicated in Table 1A of the "8240SOP" found in Appendix A, because this is the list of constituents for which the method has been validated for.

5. Although it is indicated in the PMP, pages 13 to 14 of 21, that metals and cyanide will not be included on the facility target parameter list, it is evident that Detroit Coke would anticipate finding widespread metals and cyanide contamination, possibly even in areas tentatively proposed as "background", due to the emission of scattered coal dust fines. In section 1.4.2.2, several organic laboratory parameters are proposed for the RA. However, if no organics are detected in certain areas, or if organics are found not to be in association with SWMUs, then does the possibility that metals/cyanide contamination will be left unaddressed in any future RFI studies that are planned present adverse environmental concerns?

6. Referring to section 1.5 of the QAPP, will it be possible to import the groundwater data that is generated in DMS format into GRITS format?

7. The discussion of duties for the Earth-Tech RA Project and Technical Managers is rather noninformative. Would it be possible to identify or speculate further on the possible range of duties for these individuals, instead of simply stating that a number of their duties will be directly delegated by the Detroit Coke RA Manager?

8. Referring to section 2.4 of the QAPP, who will be responsible for performing independent data validation?

9. The laboratory address(es) to which samples will be shipped during the RA should be stated in section 2 of the QAPP.

10. Referring to section 3.5 of the QAPP, will data generated during the RA be comparable to data generated during the RFI?

11. Referring to page 5 of 6 in section 3.6, Table 1-1 indicates a 1/20 frequency for field blanks. The 1/10 ratio specified in the second paragraph on this page for the equipment rinse blank is actually preferred.

12. Referring to section 4.2.1, the specific use of the referenced document should be tailored to specific constituents of concern for this project and target levels which should not be exceeded for PNAs, BTEX, and BNAs in order to meet pertinent project objectives.

13. The set of potential corrective actions briefly described in section 4.2.1 should be moved to section 13 of the QAPP.

14. In section 4.2.2, how are field blanks and equipment rinse blanks respectively defined and what are the frequencies of collection.

15. Referring to section 5.2, how are sample extracts, (e.g. BNAs and PNAs) handled under laboratory chain of custody?

16. In Table 6-1, it is stated that CCV will be <25%, as performed every 12 hours. On page 2 of 2 in section 6.0, the criteria is within plus or minus 15%, as performed every 10 samples. Then, the ICV criteria is 20% D. Please clarify the relationships between the 3 criteria, and as they will be addressed procedurally.

17. In section 7.2.2, it is stated that "no specific compounds have been identified as chemicals of concern". However, specific compounds of concern <u>are</u> identified in the target parameter list. Therefore, the matrix spiking solutions could and perhaps should be customized to the extent possible such that data of known quality and optimal reliability can be generated for this project.

18. Referring to section 9.2 of the QAPP, independent data validation should also be performed at a 100% frequency.

19. There is a reference to a section 2.12 in section 9.2.2, page 3 of 4, of the QAPP. However, it is unclear which document this section 2.12 is contained in.

20. On page 4 of 4 in section 9.3 of the QAPP, there are references to calibration verification of blanks. However, procedures for initial and continuing calibration, which are discussed procedurally in the SOPs contained in Appendix A, should also be itemized. Blank data results should also be part of the final report (i.e. not just " calibration verification of standards and blanks"). It should be mentioned under section 9.3 that the final data deliverables should be in a "CLP-like" deliverables format.

21. Under section 10.2.2.3, inspection of "typical" data deliverables packages should also be included.

22. Preventative maintenance items, mentioned in section 11.1, for field activities should be tabulated.

23. Although in section 13.0, it is mentioned that an individual in the U.S. EPA's QAS will be notified, actually, initial contact should first be made with Greg Rudloff.

24. Given that the number and types of samples to be taken, as proposed in the RA plan has not been definitively

established, the statement introducing section 13.1 loses significance. An effort should be made to decide exactly how many samples shall be taken, and then modify the procedure via the corrective action mechanism if modifications become necessary.

25. Section 13.2 in the QAPP should refer to some specific circumstances which may have the effect of triggering corrective action. For example, see sections 6.6.3, 6.6.5 and 6.3 of method "8270SOP", and section 8.1.2.1 of "8240SOP", and, for the latter method, situations when the %D criteria for CCC response factors are exceeded for the daily calibration check.

26. Referring to section 13.3 of the QAPP, another laboratory may not be used without written approval of the U.S.EPA. (Switching laboratories for any purpose may not be engineered through a simple corrective action procedure.)

27. Referring to Table 1-1, references to "8270 (BNAs plus pyridine)" and "8270 (PNAs)" seem incongruous because PNAs are classified as "base/neutrals". In the "MS/MSD", "Duplicates", and "Field Blanks" columns, the actual number of samples should be stated, not simply the frequency of collection. Ranges of samples should not be indicated in the "Investigative Samples" column, a matter which may have to be reconciled with page 19 of 21 in the PMP. (Also see comment III.24 above.) The depths at which samples shall be taken should be reflected in Table 1-1. It is not entirely clear why there are 2 rows for SWMUs 1 through 8 in both the "Matrix" and "Field Parameters" columns. Is it intended to take samples for VOA analyses if background areas are "obviously contaminated"?

28. In Table 6-1, for initial calibration, the % RSD should be < 30% for calibration check compounds, (and, for both methods 8240SOP and 8270SOP, all target analytes should be included in the 5 standards).

29. In Table 6-1, under the "Method Reference" column, which method, 8240 or 8260, will be used? Actually, the method reference should directly identify names of the SOPs proposed for use.

30. For internal standards, the retention times should be within plus or minus 30 seconds from the previous calibration and their area must be -50% to + 100%. (e.g. see section 9.4 of the "8270SOP".) Other similar and analogous qualitative identification criteria also exist for the volatiles to be determined by the "8240SOP". Such criteria should be added to Table 6-1, possibly in the form of footnotes.

31. Referring to Table 7-1, method selection should be deferred until after the target criteria (e.g. Act 307 criteria) have

been fully established. Given the potential for encountering widespread contamination and resulting analytical interferences, it may be difficult to achieve sensitivities for this RA near health based limits for groundwater for certain target analytes.

32. Although two extraction procedures have been identified in Table 7-1 for the soil and water matrices respectively, it may be absolutely necessary to employ more rigorous cleanup procedures, given that the site could be extensively contaminated both with coal dust fines as well as ample amounts of TPH. For instance, it may be necessary to perform gel permeation chromatography on soil samples prior to analysis. Once the project objectives have been more rigorously defined, it should be possible to evaluate the extent to which sample cleanup must be performed to remove analytical interferences in samples to be analyzed for PNAs and BNAs.

33. Table 7-1 does not reflect analytical procedures to be performed in the field. It may be necessary to consider the addition of field tests to supplement the performance of any field headspace tests performed on soil samples to more reliably characterize the sources of "obvious contamination". However, this strategy must be reconciled and coupled with the nature of the overall project objectives.

34. Referring to Table 7-3, the method detection limits based on a 5 mL purge for the groundwater matrix may be insufficiently high for certain target parameters if the project purposes include comparison to health based values. Also, until a more effective rationale is presented, the list of 4 VOCs must be regarded as noncomprehensive. After all, it is possible to analyze many other VOCs using the "8240SOP".

35. An unresolved issue concerns how the proposed reporting limits found in Table 7-3 compare to the target levels that are required for this project? Table 7-3 must be supplemented with two additional columns comparing these target limits with the proposed reporting limits for all media to be sampled. For all instances where an Act 307 or other relevant limit cannot be attained, there must be rationale presented for why it may not be necessary (or even impossible) to achieve the target limit.

36. It is unclear why data for all semivolatile constituents found in Table 7-3 won't be reported for all 4 SWMUs. Method "8270SOP" is capable of being used for all the semivolatile constituents found in Table 7-3.

37. Method "8270SOP" provides relatively high reporting limits for pentachlorophenol in groundwater. However, there are

other methods that will allow analysis of this constituent to lower levels more comparable with the human health 1/1,000,000 risk of 0.7 ppb. The rationale for why certain target levels may or may not be achieved must be explored further. (Also see comment III.35 above.)

38. Why is the compound, fluorene, listed twice in Table 7-3?

39. Referring to Table 8-1, please clarify why the stated criteria differ slightly from the "windows" expressed in Table 7 of 8270SOP? Also, are the values expressed in the "Precision" column intended to be in RPD? What does footnote (1) refer to? Why doesn't the criteria for VOCs match that provided in Tables 11 and 12 of 8240SOP more closely?

40. In Table 8-2, the ranges seem rather low for 8240 surrogates. Also, what is the rationale for not using 1,2 dichloroethane as an 8240SOP surrogate? Table 10 of method 8240SOP should be referenced in this table. Why is it that surrogates for semivolatiles do not exactly coincide with Table 6 in 8270SOP?

41. Table 6-1 references 8260, but "8240SOP" is apparently based on U.S.EPA methods 8240 and 624.

42. There are two possible ion traps for 8240SOP. Which one will be utilized for the Detroit Coke RA?

43. Tables 2A and 2B list Act 307 "ODLs", Operating Detection Limits. It should be explained in the QAPP how these particular criteria would apply to the Detroit Coke RA.

44. In a previous external audit conducted at the WWE Grand Rapids facility, it was determined that the 50 ppb level for acetone and other ketones in groundwater was an excessively high reporting limit. Perhaps for the Detroit Coke RA, this level could be reduced to 10 ppb.

45. For the 8240SOP, the lowest internal standard for initial calibration is significantly higher than some of the Act 307 or other health based limits which may be pertinent to the project. This issue awaits further discussion following elaboration/clarification of the project objectives.

46. Especially if high VOCs concentrations are anticipated to be found in soils, the methanol extraction procedure may yield more accurate data than would be possible using the heated purge and trap, although at the expense of higher detection limits. This matter should be considered during reformulation of the project objectives.

47. In section 11.2.3, it is stated that the standard deviation of the blank would be subtracted in the process of

performing an MDL study. Subtraction of blank concentrations will not be allowed for the Detroit Coke investigational samples.

48. References to internal standards indicated in the fifth column of Table 1 of the 8270SOP are not specifically related to actual internal standards.

49. In Table 2 of 8270SOP, where is footnote 1?

50. Referring to section 4.0 of the 8270SOP, which GC/MS system will be used for the Detroit Coke RA, the Extrel or the Saturn?

51. Referring to section 8.1.5 of the 8270SOP, will tentatively identified compounds be reported for this investigation?

52. Referring to Earth Tech's A-12 SOP in Appendix B, bailers shouldn't be used for VOCs sampling.

53. The suitability and limitations of the 2 detectors specified in the Earth Tech SOP A-34 should be discussed in relation to the list of volatile target constituents which will be measured in the field.

U.S. EPA/DETROIT COKE

JUNE 30, 1994

MEETING AGENDA

I. Introductions

A. U.S. EPA

1. Greg Rudloff, Region V WMD (312) 886-0455
2. Allan Melser, Region V UIC (312)???-????

B. Detroit Coke Facility Project Team

1. Paul Choinski/Mark Kamholz, Detroit Coke (313) 842-6222
   Fax (313) 843-8420
2. Tim Love, Allied Signal (201) 455-3190
   Fax (201) 455-4835
3. Allen Reilly/Craig VandenBerge, Earth Tech (616)942-9600
   Fax (616) 942-6499

C. Roles & Responsibilities of Detroit Coke Project Team

II. Detroit Coke's General Philosophy/Schedule and Objectives for Day

A. General Philosophy

1. Work with the U.S. EPA in a cooperative manner
2. Use informal contact, where appropriate, to expedite process
3. Be proactive/anticipate
4. Focus on objectives of CA program/Do not get caught up in procedure
5. Acknowledge site and regional history as well as future land use in developing sampling and analysis plans and, if necessary, in the fashioning of a corrective measure.
6. Move through the CA process as expeditiously and cost effectively as possible

B. Objectives/schedule for meeting

1. Objectives
   a. Familiarize key agency personnel with facility
   b. Describe scope of work for RA
2. Schedule

III. Current Conditions at the Facility

A. Action items completed since last visit by U.S. EPA

1. Accumulated coal tar residuals removed from SWMU 11 and transported to coke plants for recycling.
2. Underground line removal (e.g. coke oven gas lines).
3. Pre-demolition asbestos abatement
4. PCB transformer evaluation and removal
5. Removal of No. 6 fuel oil tank

B. Demolition activities

C. Current Site Uses

IV. Administrative/regulatory issues

A. QAPP (Pre-QAPP meeting?)

B. Delegation of CA program to State

1. Timing
2. Effect on Detroit Coke's CA obligations
   a. Options
   b. MDNR involvement in process

C. Other state authorities

1. The Michigan Environmental Response Act (P.A. 307 of 1982, as amended)
2. Need for integrating state standards into all work
   a. Procedural (TMDLs, guidance on investigations)
   b. Substantive (risk-based standard setting)
      i. action levels
      ii. target levels

IV. Technical approach for the RFI-Release Assessment

[SEE ATTACHED TEXT AND FIGURE]

V. Site Walkover

TECHNICAL SCOPE OF WORK FOR THE RFI-RELEASE ASSESSMENT AT THE DETROIT COKE CORPORATION

The purpose of the Release Assessment is to document the presence or absence of hazardous wastes or constituents at individual SWMUs in order to determine whether further investigation is warranted. If data collected during the RA suggest a release has not occurred at a SWMU, then the unit would not be addressed during the RCRA Facility Investigation (RFI). As a result, it is imperative that the RA generate data which are of sufficient quality and quantity to support the determination of no further investigation at a SWMU.

The Detroit Coke Corporation has elected to conduct the optional Release Assessment at SWMU's #1, #2, #18 and #20. Historical records and house keeping practices at these locations suggest that it is unlikely a release has occurred at these units. A Release Assessment is not proposed for the remainder of the identified SWMU's (#3, #5, #6, #11, #12, #13, #15, #19 and #21). They will be carried forward and investigated in the RFI phase of the Corrective Action Program.

SAMPLING AND ANALYSIS STRATEGY

General

Earth Tech has developed a sampling and analysis strategy for the collection of data which are of sufficient quality and quantity to permit a determination to be made of which, if any, of SWMU's #1, #2, #18 or #20 should be the subject of an RFI. The focus of the strategy is to investigate environmental media that are judged to have the greatest potential for impact due to a release(s) from an individual SWMU. The sampling and analysis strategy is flexible enough to provide for the collection of sufficient data to document the absence of hazardous wastes in the event that a release has not occurred, while minimizing the collection of redundant data documenting the presence of impact in the event that a release has occurred.

The U.S. EPA suggests that the technical approach for a Release Assessment should be developed on a case-by-case basis, considering unit- and site-specific factors. Such factors include: (1) the likely release mechanism; (2) the characteristics of the chemicals managed at the unit (mobility, volatility, miscibility, solubility, etc.); and (3) the

characteristics of the site (topography, hydrogeology, etc.) Earth Tech has structured the sampling and analysis strategy to provide for the collection of a sufficient amount of field and analytical data to support the assessment that a release has not occurred, given the site setting, history and physical features of each individual SWMU.

The strategy is based on the Michigan Department of Natural Resources (MDNR) *Guidance for the Verification of Remediation (April 1994).* This guidance, which was developed to verify the absence of contamination above a pre-specified level during RCRA closures or after completion of remediation, provides useful technical approaches that employ biased field screening, statistically representative sampling plans and corroborating laboratory analysis. These approaches will allow strong conclusions to be made regarding the potential for a past release(s) from a SWMU.

In preparing the sampling and analysis plan for the Release Assessment, Earth Tech has acknowledged the long industrial history of the site and the area in which it is located. A significant potential exists for analytical interference from non-SWMU related materials during the Release Assessment. Due to similarities in chemical composition to wastes managed in SWMUs, fill material, surficial coal fines, and air deposition products known to be present at the site may generate confounding results. In order to minimize the potential for false positive analytical results, Earth Tech proposes to use site-specific background and carefully selected release indicator parameters to attempt to distinguish SWMU-related releases from other regional industrial contamination.

Laboratory Analysis for Release Indicator Parameters

Selected soil samples and all ground water samples will be analyzed for parameters that are judged to be indicative of a release for the associated SWMU. These parameters have been identified based upon the hazardous wastes or constituents managed in each SWMU but are not intended to include all potential hazardous constituents. The parameters selected are intended to be sufficient to indicate a release without being subject to interferences from constituents that may be present due to non-SWMU related activities at the site (foundry fill material or incidental coal dust). Specifically, samples associated with SWMU's that handled oil (including diesel) will be analyzed for aromatic purgeables (benzene, toluene, ethylbenzene, xylenes) and polynuclear aromatic compounds (PNA's). Samples associated with SWMU's that handled coal tar, coal tar gasses and/or ammonia liquor will be analyzed for aromatic purgeables and base/neutral/acid semi-volatile organic fractions (BNA's including phenol and pyridine).

SWMU-Specific Sampling and Analysis Strategy

The sampling and analysis strategy for SWMUs #1, #2, #18 and #20 is outlined briefly below:

SWMU 1 OIL PUMP SPRAY AREA/BULK DENSITY OIL UST

Description: Oil stored in this unit was sprayed onto the coal prior to its placement in the ovens. This unit originally consisted of an oil UST of unknown size. The UST is still present although it was emptied and filled with sand prior to abandonment. A concrete secondary containment structure was constructed over the abandoned UST for containment of a 10,000 gallon above ground oil storage tank. The tank contained oil and diesel fuel. The above ground oil storage tank and concrete containment unit are no longer present at the site.

Sampling and Analysis: In order to evaluate a potential release to shallow soils due to spillage, overflow and/or leakage from the shallow containment structure, soil samples will be collected from depths of 2 to 3 feet around the unit. Soil samples will also be collected from borings placed at the ends of the UST and extending to a depth of 10 feet below ground surface to evaluate a potential release from the UST. If ground water is encountered within 10 feet of the surface, a downgradient ground water sample will be collected via a temporary monitoring well. Proposed soil/ground water sampling locations are shown on the attached site map. Actual sample locations may be modified in the field, based on any visual observations indicating potential impact. Based on the comprehensive sampling and analysis plan for this SWMU, it is estimated that soil samples will be collected from a maximum of 6 soil borings (four to 3 feet and two to 10 feet). One ground water sample may be collected. A maximum of 3 soil samples and 1 ground water sample will be analyzed for release indicator parameters (purgeable aromatics and PNA's).

SWMU 2 COAL FINES RECOVERY BASINS AND COAL TAR RECYCLING AREA

Description: This unit consisted of two 15 x 40 feet concrete settling basins which were approximately 16-18 feet deep. The basins were used to recover coal from the preheat process. Rainwater, residual coal fines and residual coal tar were removed from the unit in 1992. The concrete basins were "shoveled clean" and filled with approximately 500 cubic yards of clay.

Sampling and Analysis: Soil samples will be collected to a depth of 18 feet (corresponding to the depth of the bottom of the basins) at regular intervals around the unit to evaluate a potential release to soils due to overflow or leakage of the basins. If ground water is encountered within 18 feet of the surface, a downgradient ground water sample will be collected via a temporary monitoring well. Proposed soil/ground water sampling locations are shown on the attached site map. Actual sample locations may be modified in the field, based on any visual observations indicating potential impact. Based on the comprehensive sampling and analysis plan for this SWMU, it is estimated that soil samples will be collected from a maximum of 8 soil borings. One ground water sample may be collected. A maximum of 6 soil samples and 1 ground water sample will be analyzed for release indicator parameters (purgeable aromatics and BNA's).

SWMU 18 FLARE STACK

Description: This unit consisted of a stack which was used to flare excess coke oven gas. Detroit Coke demolished the flare stack and associated piping.

Sampling and Analysis: Shallow soil samples will be collected from depths of 2 to 3 feet within the vicinity of the former stack location in order to evaluate potential releases to the surface from leakage from the welded steel stack. Proposed soil sampling locations are shown on the attached site map. Actual sample locations may be modified in the field, based on any visual observations indicating potential impact. Based on the comprehensive sampling and analysis plan for this SWMU, it is estimated that soil samples will be collected from a maximum of 4 soil borings. A maximum of 2 soil samples will be analyzed for release indicator parameters (purgeable aromatics and BNA's).

SWMU 20 DRUM STORAGE AREA

Description: This unit consisted of a 40 x 60 foot curbed concrete pad. Blind sumps were located in each corner of the pad to collect spills. The unit was used to store virgin oils prior to their use in the coking process. Detroit Coke demolished and removed the concrete pad, and capped the area with approximately 12 inches of clay to bring it back to grade.

6ft - sumps ~5ft. deep.

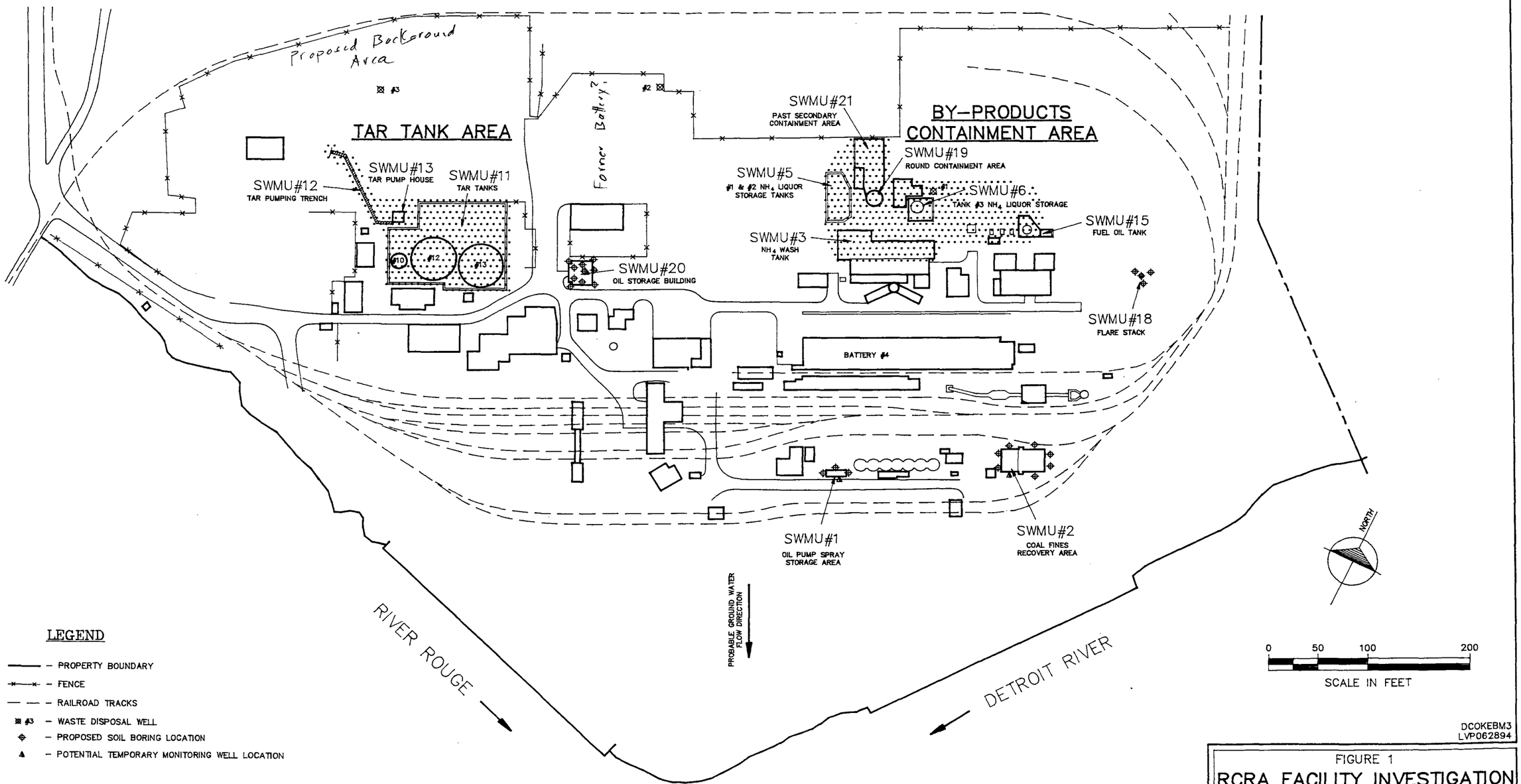
Sampling and Analysis: Soil samples will be collected from depths of ~~2 to 3~~ feet to evaluate potential releases to shallow soils due to overflow or leakage of the shallow containment structure. Proposed soil sampling locations are shown on the attached site map. Actual sample locations may be modified in the field, based on any visual

observations indicating potential impact. Based on the comprehensive sampling and analysis plan for this SWMU, it is estimated that soil samples will be collected from a maximum of 10 soil borings. A maximum of 5 soil samples will be analyzed for release indicator parameters (purgeable aromatics and PNA's).

Looking Forward: RCRA Facility Investigation

As mentioned previously, the remaining SWMU's will be carried forward and addressed during the RFI. It is Detroit Coke's intention to group the remaining SWMUs into two areas based on proximity of the SWMU's to one another, similarities in operational history, and in the materials managed, stored or contained within the units. Using this set of criteria, SWMU's #11, #12 and #13 have been grouped into an area identified as the "Tar Tank Area" and SWMU's #3, #5, #6, #15, #19 and #21 have been grouped into an area identified as the "By-Product Containment Area". These areas are identified on the attached Figure 1. The RFI work plan will focus on evaluating these areas rather than on specific units. This technical approach will streamline and expedite the implementation of the RFI by: (1) reducing the amount of investigative effort expended on segregating potential release from SWMUs; and (2) identifying releases from the units within the area and, if necessary, addressing them through the design and implementation of a sound corrective measure.

This technical approach is consistent with Detroit Coke's philosophy (as well as MDNR/U.S. EPA Region V's policy) of focusing the corrective action process on end uses. This facility is located in the most heavily industrialized area of metropolitan Detroit. Risk assessment techniques, therefore, will be used to focus future data gathering activities on the collection of data which is necessary to evaluate risks at an industrial facility. Risk assessment will also be used to evaluate data generated during the RFI within the context of the reasonably foreseeable future uses of the property and, if necessary, to develop a corrective measure that will be protective for those uses.



LEGEND

- PROPERTY BOUNDARY
- FENCE
- RAILROAD TRACKS
- #3 – WASTE DISPOSAL WELL
- PROPOSED SOIL BORING LOCATION
- POTENTIAL TEMPORARY MONITORING WELL LOCATION

DCOKEBM3
LVP062894

FIGURE 1

RCRA FACILITY INVESTIGATION

RELEASE ASSESSMENT SAMPLING LOCATION MAP

DETROIT COKE CORP.
DETROIT, MICHIGAN

JUNE, 1994

22886

TRIP REPORT

Dates of Travel: June 29 - July 1, 1994

Location: Detroit, Romulus and Milan, Michigan

Purpose: To conduct RCRA corrective action inspection of Detroit Coke facility and site inspections of the EDS and Envotech facilities

Region 5 Personnel: Allen Melcer and Chad Kincheloe, UIC
Greg Rudloff, RCRA - MI Permitting

Other Attendees: Detroit Coke
Paul Choinski, Detroit Coke
Tim Love, Allied-Signal
Allen Reilly, Earth Tech

EDS
Vince Sheiger, EDS

Envotech
Merle Denny, Envotech

Prepared by: Allen Melcer

Discussion - Detroit Coke

On June 30, 1994, USEPA conducted a RCRA corrective action (CA) facility inspection of the Detroit Coke (DC) site and held a meeting with the DC and Allied Signal representatives and their consultants, Earth Tech. The inspection showed that DC is continuing to dismantle the site, although they have ceased removing SWMUs until the CA gets underway. They are currently dismantling the coke ovens and some tank batteries. No new SWMUs have been discovered thus far during the clean-up activities.

Allied-Signal has become involved in the clean-up because they sold the site to DC in 1980, but still own portions of the site today. Currently, DC is developing a RCRA Facility Investigation (RFI) Release Assessment workplan which is due to be submitted by 8/24/94. The purpose of the RFI Release Assessment is to demonstrate that some SWMUs did not have releases and can be dropped from the RFI. In the CA meeting, DC stated that their strategy for the Release Assessment is to acknowledge that some SWMUs had releases from them and should rightfully be included in the RFI, so that DC will not expend resources trying to have those SWMUs removed from the RFI list.

USEPA and DC agreed to conduct the CA using the new cooperation model being developed by RCRA and the regulated community. This involves using an informal approach to modifying the workplan and various actions taken during the RFI, rather than issuing formal modifications to the workplan. It also involves approval of such

changes at the technical staff level rather than at the section or branch chief level.

The issue of delegation of CA authority to the MDNR was also discussed. Apparently, the delegation of CA to the MDNR is imminent. The question was raised as to which agency would oversee the CA once the program was delegated. It is expected that the Region would finish projects that are currently underway, including Detroit Coke, and that MDNR would oversee all new CA projects. This answer was given as a best guess and we agreed to notify DC immediately if it appears otherwise.

EDS Site Inspection

On June 30, 1994, USEPA conducted an unannounced site inspection of the EDS disposal facility in Romulus, Michigan. The inspection showed that no flow lines were hooked up to the well and that the pressure on the annulus was <10 psig. The area around the wellhead was graded and surfaced with gravel. No ruts, grooves or tire tracks were apparent in the gravel around the wellhead, indicating that no trucks have been driven up to the wellhead in the recent past. Finally, UIC had been receiving reports of a second well having been drilled on site without UIC authorization. No evidence of a second well was found during the inspection.

Envotech Site Inspection

On June 30, 1994, USEPA conducted an unannounced site inspection of the proposed Envotech injection well site and the Arkona Road Landfill (ARL) clean-up site. The proposed injection site is currently under cultivation and there was no appearance of any clearing of the site.

The ARL is being cleaned-up under a remedial action plan (RAP) issued by the MDNR state Superfund program (Act 307). The ARL was being regraded with additional leachate collection wells and monitoring wells installed. A new leachate collection system is also under construction. The area around the ARL is being prepared for the installation of a slurry wall. Several breakouts of leachate have occurred during the clean-up. The breakouts are contained by patching with clay. Leachate was observed leaking into a diked area. The leachate is generally characterized by an orange-brown color and a solvent-like odor. Currently, the leachate is pumped into tank trucks and taken offsite to a privately-owned treatment facility in Detroit, Michigan.

Envotech has fallen behind the schedule contained in the RAP and are having problems with the contractor. The contractor and Envotech reached an agreement to end their involvement in the RAP. Envotech is now evaluating the progress made on the RAP and determining whether to hire a new contractor.

Follow-up Actions

Detroit Coke

Wait on the submittal of the RFI Release Assessment Workplan. Once it is submitted, begin joint review with RCRA.

EDS

Provided inspection report to Dave Werbach, permit writer, and to UIC Enforcement. No other follow-up activity is anticipated.

Envotech

The draft permits for the injection wells are now on public notice and a public hearing will be held. We will use the information gathered during the inspection in responding to public comments.

cc: Dave Werbach, UIC
Chad Kincheloe, UIC
Greg Rudloff, RCRA

Allen Keleer

DETROIT COKE CORPORATION
BOX 09229/DETROIT, MI 48209/(313) 842-6222

January 4, 1994

DCC93001

U.S. Environmental Protection Agency (WD-17J)
Mr. Richard J. Zdanowicz, Chief
Underground Injection Control Section
77 West Jackson Boulevard
Chicago, IL 60604

CERTIFIED MAIL

Transmittal
Response to U.S. Environmental Protection Agency Letter Dated October 1, 1993
Underground Injection Control Permits #MI-163-1W-0003,
#MI-163-1W-0004, and #MI-163-1W-0005
Detroit Coke Corporation
Detroit, Michigan

Dear Mr. Zdanowicz:

Detroit Coke Corporation (Detroit Coke) is pleased to respond to the U.S. Environmental Protection Agency's (EPA's) letter of October 1, 1993, which requests some additional information regarding certain potential Solid Waste Management Units (SWMUs) located at Detroit Coke's facility in Detroit, Michigan. Our responses primarily relate to those areas where EPA has requested additional information; however, where appropriate, we have also included additional clarifying information for various SWMUs and information regarding coke-making operations.

EPA issued draft major modifications to Detroit Coke's Underground Injection Control (UIC) Permits #MI-163-1W-0003, #MI-163-1W-0004, and #MI-163-1W-0005 on March 29, 1993. The draft major modified UIC Permits were issued for public comment, on April 15, 1993. Detroit Coke submitted comments regarding all three UIC Permits on May 28, 1993. EPA's letter of October 1, 1993 generally includes EPA's reaction to Detroit Coke's letter of May 28, 1993. This current letter is being submitted by Detroit Coke to respond to EPA's

requests and to submit certain clarifying information. Detroit Coke respectfully requests that this letter be placed in the Administrative Record for these permits.

Before presenting our specific comments, Detroit Coke, to assist EPA in understanding the Coke By-Products Department, provides a general overview of the operations of the Coke By-Products Department. Figure 1 provides a general schematic of the By-Products Departments operations; this text and Figure 1 explain some of the interrelationships between SWMUs in this area.

The primary purpose of the By-Products Department is to treat coke-oven gas at rate of 15 to 26 million standard cubic feet per day and to recover tar, liquor, and gas for future distribution or disposal. During the coking process, certain gases are emitted into the collector main outside the oven chamber. The hot gases are cooled by a spray of flushing liquor; the flushing liquor is constantly recirculated. This mixture of liquor, gases and tar in the collector main then flow to the By-Products Department for different processes.

One process involves the downcomer; the downcomer's purpose is to separate the gas from the tar and the liquor. The gas is drawn by a turbine-driven exhauster suction to the primary cooler (operation of the coolers is described later). The remaining components (liquor and tar) fall to the bottom of the downcomer and then flow into one of the two tar decanters for separation. In the tar decanters, the tars settle to the bottom while the liquor floats to the top. As the tar decanters are filled, the tar is pumped to the #10 storage tank (which is part of SWMU 11) until the tar is subsequently sent to the tar plant for processing.

The liquor overflows into the two flushing liquor circulation tanks. Once in the tanks, the liquor is ready to be recycled back to the oven spray header for cooling the coke-oven gas. A pump draws the liquor from the tanks and sends it through a tar strainer (which is located directly above the tar decanter area) to remove carbonaceous materials from the liquor. Once the liquor leaves the straining station, it is routed back to the coke-oven spray header system where the cooling process is repeated.

The coke-oven gases are drawn from the collector main by means of a turbine-driven exhauster. These gases must be cooled and cleaned before any additional use can be obtained. Cooling the gases is performed first in the primary cooler, which has two sections, top and bottom. Each of those sections are supplied with liquor that cools the gases from overhead sprays. The liquor is recirculated through spiral heat exchangers, cooled and pumped back into the top sprays. The gases travel up through two liquor gravity sprays in the bottom section and through two additional pressure sprays in the top section before exiting at temperatures near 100° F.

Excess liquor in the primary cooler system flows into a sump, where a pump subsequently pumps it into the tar decanter for further separation.

Upon exiting the top section of the primary cooler, the gases enter each of the three sections of the secondary cooler for additional cooling. The bottom section has two nozzles where liquor is sprayed from and recycled through two heat exchangers. The middle and upper sections have an independent system by which liquor is circulated through pumps, into the sprays, and back into the pumps without a spiral heat exchanger. Any excess liquor in the secondary cooler will be routed into the sump and eventually be pumped to the #1 weak liquor tank (part of SWMU 5).

Upon exiting the secondary cooler, the gas is drawn through the exhauster. The gases are always under the influence of the exhauster's action, whether the final disposition of the gases is disposal or redistribution. The purpose of the exhauster is to extract the gas from the coke-oven battery, cause flow to the various recovery stations, and discharge the gas to its desired locations. As the gas enters the exhauster, it is compressed and expelled with an increase in pressure and temperature.

The gases, now under pressure, upon leaving the exhauster enter the bottom section of the ammonia wash tower (SWMU 3). The liquor circulation system of the ammonia wash tower is the same as the secondary gas cooler. The two spray nozzles of the bottom section wash the gas with cooled liquor and the middle and top spray nozzles wash the gas with recycled liquor.

There is an additional spray of make-up water at the top of the ammonia wash tower for controlling the ammonia content of the coke oven gas. The top liquor circulation content of ammonia is controlled such that it is less than one gram per liter.

Our specific comments are organized as follows:

- EPA's Comment Number, as identified in the October 1, 1993 letter
- EPA's Comment Text
- Detroit Coke's Response.

1. <u>EPA Comment #12 in main section and EPA Comment #1 in SWMU section</u>:

<u>EPA's Comment Text</u>:

The unit name for SWMU #1 unit name is Oil Pump Spray Storage Area. The U.S. EPA considers this unit to meet the definition of a SWMU pursuant to proposed rule 40 Code of Federal Regulations (CFR) Part 264, Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities, July 27, 1990, (Subpart S). Spillage at a loading area does constitute a "routine and systematic" release. Also, since no sampling was done when the underground storage tank was closed, the possibility of releases must be investigated in an RFI Release Assessment. In addition, since the

tank was abandoned in place and filled with sand, tank bottoms may still be present within the tank.

Response:

EPA considers this unit to meet the definition of a SWMU primarily because no sampling was performed when the underground storage tank was closed. Detroit Coke respectfully requests that the unit name reflect this comment and it be changed to Bulk Density Oil UST.

The Bulk Density Oil Tank was used to store oil, which was added to the coal mixture to control its bulk density. This steel tank was installed in the early 1970s, thus was approximately 15 to 20 years old at its closure. This UST was taken out of service and was not removed because removal from the ground would potentially cause structural damage to adjacent storage bins and conveyors. When the tank was taken out of service, the oil was pumped and suctioned into a tanker truck; the oil was then used as a product in the Coke Plant. The tank was visually inspected, then was filled with sand.

Two Material Safety Data Sheets (MSDSs) for oils that could have been stored in the UST are attached (Attachment A). This product could have contained hazardous constituents, but it is important to note that it was product, which was purchased by Detroit Coke, and thus had value.

As indicated in Detroit Coke's previous comments on May 28, 1993, an Above Ground Storage Tank (AST) was used to store oil after the UST was closed. The AST has been removed, sold as scrap, and the sediments and coal fines have been removed from the containment area. The water in the containment area was transferred to Tank #3.

Detroit Coke continues to believe that this area should not be subject to an RFI Release Assessment.

2. EPA Comment Number 4:

EPA Comment Text:

The U.S. EPA requests that Detroit Coke submit additional information to document that solid waste was not managed in this unit and that routine and systematic releases did not take place. Such information shall at a minimum include:

- Where excess ammonia liquor was drawn off from the system for disposal
- Inspection and maintenance practices for the tank

- How the tanks were operated.

Response:

Please refer to our earlier general discussion regarding the operation of the By-Products Department. Additional clarifying information is contained within this section.

The two flushing liquor tanks were used to store weak ammonia liquor that was used in the coking process. The liquor was used to cool the gases and absorb tar from the gas. All liquor from the coke battery and the cooling towers was recycled back to the decanters. The liquor thus was routed back to the storage tanks and reused.

When the coke plant was in operation, it ran 24 hours per day and 365 days per year. The By-Products Department always had two trained employees in this area; a By-Products Supervisor (who was highly trained) was also located in the By-Product Recovery area. The By-Product Supervisor would visually inspect all vessels on a daily basis for pressure reading(s), temperatures, structural appearance and indication of any leaks. Any abnormalities would immediately be brought to the attention of the Plant Manager.

The By-Products operators' responsibilities were to operate and maintain the By-Products area and included visually inspecting the levels, pressures, temperatures, and vessel structure(s) for the flushing liquor tanks at two-hour intervals. These two-hour inspections were performed 24 hours per day. Any abnormalities would be reported to the Area Supervisor or the Shift Supervisor immediately.

The tanks also were located within a curbed concrete pad.

A panel in the operators' room had high- and low-level lights and alarms to indicate high- or low-levels within the tank. The tanks also had valves to allow isolation for a yearly inspection; lines were available to send liquor to either tank in the event of a problem with the other tank.

Some specific inspection and maintenance practices for the tanks and ancillary equipment are contained within Attachment B, which is an excerpt from an operation and maintenance manual. Some of operation and maintenance procedures performed by the operators during their every two-hour inspections included the following:

- Section M, Maintain Flushing Liquor Pumps
- Section N, Maintain Flushing Liquor Strainer
- Section Q, Maintain Gas Cooling and Flow

- Section R, Maintain Liquor Circulating Systems
- Section S, Circulating Liquor Pumps.

Detroit Coke does not believe this area should be subject to an RFI Release Assessment.

3. EPA Comment Number 10:

EPA Comment Text:

The U.S. EPA requests that Detroit Coke submit additional information to demonstrate that the Tar Decanters were operated in a way to prevent the routine and systematic release of hazardous constituents to the environment. Such information shall at a minimum include:

- Detailed operating procedures for the unit
- Inspection and maintenance practices for the unit
- Procedures in case of spills.

Response:

Certain general information is available from Detroit Coke's overview of the Coke By-Products Department contained earlier within this letter. With respect to procedures in the event of spills, Attachment C presents Detroit Coke's Contingency Plan, which was designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned, sudden or non-sudden release of hazardous waste or hazardous constituents to air, soil or surface water.

Job responsibilities for the Tar Decanter area were the same as those for the flushing liquor tanks. The By-Products Area Supervisor and two operators monitored the Tar Decanter area 24 hours per day, 365 days per year.

The decanters were located on top of concrete slabs with curbs. In the event of a spill, material would be routed to a sump and pumped back to the decanter. All pressures, temperatures levels, and evidence of leaks, if any, would be logged and reported to the Area Supervisor or the Shift Supervisor. All employees received training in hazard communication and procedures outlined in Attachment C, the Contingency Plan.

The decanters were routinely taken out of service for inspection and repairs to the scrapers, piping, and steam heaters. The scrapers, which were located at the bottom of the decanters, rotated continuously. Section K in Attachment B provides specific scraper maintenance procedures. Section L in Attachment B provides information on maintaining the Tar Decanter heating system; Section

P in Attachment B specifies the two-hour inspection procedure for the Tar Decanter.

Beneath the discharge chutes for the decanters, a mobile trailer would be located to catch the K087 as the scrapers pushed the material through the chute; the material was subsequently recycled back to the coke ovens on a daily basis by mixing it with the coal.

Detroit Coke does not believe this area should be subject to an RFI Release Assessment.

4. EPA Comment Number 11:

EPA Comment Text:

The U.S. EPA disagrees with Detroit Coke that the coal tar within this unit is excluded from the definition of solid waste under 57 FR 27880. The preamble for 57 FR 27880 states that "an abandoned spill of these material (viz. a spill not pick up expeditiously and used beneficially) constitutes disposal of a hazardous waste." The spilled coal tar in the secondary containment was not picked up expeditiously. During the RFA it was stated that the coal tar had been there "as long as could be remembered." Therefore the spilled coal tar constitutes disposal of a hazardous waste.

This unit meets the definition of a SWMU pursuant to proposed rule 40 CFR 264 Subpart S since the unit managed the spilled coal tar which constitutes a solid waste. Also, due to the coal tar flooding the secondary containment, it has not been possible to assess the integrity of the secondary containment structure. Given the length of time that the structure has held the spilled coal tar, the possibility of the release of hazardous waste or hazardous constituents from the containment structure must be investigated.

The U.S. EPA will continue to consider this unit a SWMU which requires further investigation in an RFI Release Assessment.

Response:

Detroit Coke wishes to provide an update to EPA regarding progress of interim measures at this unit. We are continually recycling material from this area. To date, approximately 600 tons of material has been recycled from the secondary containment area. Water has been routinely pumped off and sent to the #3 storage tank for subsequent deep well disposal.

5. EPA Comment Number 15:

EPA Comment Text:

The U.S. EPA requests that Detroit Coke submit additional information to demonstrate that the routine and systematic release of hazardous constituents did not occur in this unit. Such information shall at a minimum include:

- Loading/unloading practices for the tank
- Inspection and maintenance procedures for the tank
- Procedures in case of spills.

Response:

Please refer generally to our previous discussion regarding the inspection and maintenance procedures (Attachment B) and the Contingency Plan (Attachment C).

This diesel fuel tank was used to store diesel fuel for operation of diesel equipment required in the coke plant. The Storeroom Manager was responsible for visually checking the level in the tank on a daily basis to monitor for purchasing additional diesel fuel. The Storeroom Manager would also visually check the tank and its pump for any evidence of leakage; if leakage were found or any malfunction occurred, the Storeroom Manager would notify the Plant Manager. Also, operators on the 4:00 to 12:00 p.m. and midnight shifts would routinely check for malfunctions as they filled their equipment.

As previously described, all coke plant personnel were trained in hazard communication and the requirements contained within the Contingency Plan.

During the RFA, EPA noted a black ring on the interior of the containment structure. The staining on the concrete is attributable to nature of the coking process; any water or material located within the dike would be pumped to a tanker and then recycled back to the By-Products area. It should be noted that material stored in this tank was a product, was purchased by Detroit Coke, and thus it would be abnormal for spills to be routine and systematic, as the material had value.

Detroit Coke does not believe this area should be subject to an RFI Release Assessment.

6. EPA Comment Number 16:

EPA Comment Text:

The U.S. EPA requests that Detroit Coke determine the origin of the tar that coats the tank and forms an apron at its base to verify that it this not the result of spillage/overfilling of the tank. If it cannot be verified that this material is not a spill, an RFI Release Assessment will be required for the unit.

Response:

This tank held No. 6 fuel oil and was used to control the bulk density of the coal blend in the preheat coal unit. The tank had a steam heater located inside of the tank because of the viscosity of the oil. To assist in maintaining the tank contents' temperature, two inches of insulation was installed around the tank, then covered with a metal jacket. The tar-like material that was observed on the outside of the tank was a roofing material that was sprayed on when the tank was installed in the late 1970s. This sprayed-on material provided some insulation and water proofing for the underlying insulation.

Detroit Coke does not believe this area should be subject to an RFI Release Assessment.

7. EPA Comment Number 17:

EPA Comment Text:

The U.S. EPA requests that Detroit Coke submit additional information to demonstrate that routine and systematic releases of hazardous constituents did not occur from these units. Such information shall at a minimum include:

- Operational details of the unit
- The manner by which condensate was routed back to the tar decanter from the sumps
- How the integrity of the sumps and ancillary piping was tested and maintained.

Response:

Detroit Coke's general description of the Coke By-Products area and previous discussions with respect to Attachments B and C (excerpts from the operations and maintenance manual, and the Contingency Plan, respectively) provide some information. More details are supplied in the following paragraphs.

Figure 2 provides a schematic of the location of the drips and clean outs for the coke oven gas line. Twelve sumps are shown on this figure.

When the plant was in operation, gas was produced and routed through the By-Products Department for cleaning and cooling. The coke oven gas was then distributed to the coke ovens, to the Great Lakes Steel boilers, or flared. The coke oven gas lines were constructed of steel pipe and were primarily above ground. Only a small proportion of the coke oven gas lines were under ground, as shown in Figure 2.

The drip and clean out areas, which could collect moisture, were inspected and were normally pumped on a daily basis. A pump would draw liquid from the sump and pump into a portable tank. This tank would then be taken to the By-Products area and its contents discharged into the decanters for subsequent recycle. The coke oven gas line also was inspected daily for pressure and temperature. Any abnormalities would be reported immediately to the supervisor. The gas lines were also normally cleaned twice each year. The lines would be purged, then opened for cleaning and inspection. All material generated during the cleaning would be sent back to the tar decanters for subsequent recycling. The drip areas and associated piping were checked for corrosion and wear.

Currently, approximately 90 percent of the coke oven gas lines that were underground have been removed. The lines were purged and cleaned prior to closing and the piping is clean and will be cut up and sold as scrap metal. During the removal process of the underground lines, the soil around the lines exhibited no visual discoloration or odors that would be indicative of leaks.

When the lines were purged, the sumps were also visually inspected on semi-annual basis. The covers would be taken off to allow the visual inspection and the contents of the sumps would be pumped out if necessary.

Detroit Coke does not believe this area should be subject to an RFI Release Assessment.

8. EPA Comment Number 20:

EPA Comment Text:

The U.S. EPA considers this unit to meet the definition of a SWMU pursuant to proposed 40 CFR 264 Subpart S, since the heavy staining of the unit is likely from the routine and systematic release of solid wastes. The spillage of a virgin product that is not recovered constitutes disposal of a solid waste.

For the above reasons, the U.S. EPA will continue to consider this unit a SWMU which requires further investigation under an RFI Release Assessment.

Response:

This drum storage area was an engineered structure designed to contain any leakage from the drums. The drums stored in the area were primarily virgin products and there is no historical information indicating a release. EPA had noted in the RFA that certain areas were stained; the area has been subjected to interim measures which included sale of remaining virgin oil products, pumping out of water contained within the sumps, selling the steel drum racks as scrap, demolishing the concrete pad, and capping the area with approximately 12 inches of clay. Detroit Coke still believes that this area should not be subjected to an RFI Release Assessment.

9. EPA Comment Number 21:

EPA Comment Text:

The U.S. EPA requests that Detroit Coke submit additional information to document that no hazardous waste was managed within this unit. Such information must at a minimum include:

- Past uses for this unit
- Materials managed within the unit in the past
- Any available sampling from the unit or surrounding soils.

If the above information cannot be obtained, then the possibility of release of hazardous constituents must be investigated in an RFI Release Assessment.

Response:

Upon researching the past uses for this unit, Detroit Coke has determined that it was part of the old By-Products Recovery System. This containment area was never utilized by Detroit Coke and is attached to SWMU #19. Detroit Coke suggests that, because this past secondary containment area was within the old By-Products Recovery System, it be included with the RFA Release Assessment. However, because it is adjacent to SWMU #19, we would suggest that it be included with SWMU #19.

10. EPA Comment Number 32:

EPA Comment Text:

The U.S. EPA feels that due to the nature of the activity that took place at this unit, routine and systematic releases were likely to have occurred. The sheen and staining observed during the RFA further support the routine and systematic release of wastes to the floor. Since the floor of this unit is sloped to the outside without a collections sump, the potential for release to the environment is high.

For the above reasons, the U.S. EPA will continue to consider this unit a SWMU which requires further investigation under an RFI Release Assessment.

Response:

Similar to Detroit Coke's response regarding the drum storage area, the vehicle maintenance building is an engineering structure and is not unique; every service station in America could exhibit similar types of staining. EPA stated in the RFA that the potential for release was low, not high as more recently indicated. Also, since Detroit Coke submitted responses to the draft permit modification in May, some cleaning has occurred of surficial materials at this location. Materials stored within the building were primarily virgin products. Detroit continues to believe that this area should not be subject to an RFI Release Assessment.

CLOSING

Detroit Coke trusts that this letter provides sufficient information in response to EPA's questions. If you need any additional information or clarification regarding Detroit Coke's response, please do not hesitate to contact me.

Respectfully submitted,

Deborah T Marsh for

Paul Choinski
Facility Manager
on behalf of Detroit Coke Corporation

Attachments

cc: Allen Melcer

DETROIT COKE CORPORATION
BOX 09229/DETROIT, MI 48209/(313) 842-6222

May 28, 1993

Project No. 93061

U.S. Environmental Protection Agency (WD-17J)
Mr. Richard J. Zdanowicz
Chief
UIC Section
77 W. Jackson Boulevard
Chicago, Illinois 60604

Transmittal
Written Comments
Underground Injection Control Permits
#MI-163-1W-0003, #MI-163-1W-0004
#MI-163-1W-0005
Detroit Coke Corporation
Detroit, Michigan

Dear Mr. Zdanowicz:

Detroit Coke Corporation (Detroit Coke) is pleased to submit written comments on the above-referenced draft Underground Injection Control (UIC) permits for Detroit Coke's facility. The draft major-modified UIC permits were issued by the U.S. Environmental Protection Agency (EPA) on March 29, 1993; the public comment period began on April 15, 1993 and comments must be received on June 1, 1993. This transmittal includes Detroit Coke's comments regarding all three UIC permits, although for easier reference, the page numbers cited are with respect to Permit #MI-163-1W-0003. We request that consistent changes be made in the other two UIC permits.

This transmittal includes Detroit Coke's comments on the UIC permits and their attachments; within our comments are clarifications of information contained in EPA's Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) report. This response is Detroit Coke's first opportunity to comment on the RFA.

The following two documents enclosed with this transmittal:

- Comments on draft permits
- Edited permit.

Comments on Draft Permits

The comments are consecutively numbered for easier reference. The format for comments is as follows:

- Section Citation/Page No.
- Current Language
- Proposed New Language
- Rationale for the Change.

The comments should be self explanatory. Our major comment regarding the RCRA Correction Action Program is that the permits need to accurately reflect the progression from an initial RCRA Facility Investigation (RFI) Release Assessment to an RFI. The RFI Release Assessment step was clearly identified by EPA as the initial study in Attachment F (Corrective Action Scope of Work). This was discussed and confirmed with Mr. Gregory A. Rudloff (EPA geologist) at our April 15th meeting.

Another major topic of discussion within Detroit Coke's comments is the list of Solid Waste Management Units (SWMUs). Detroit Coke originally identified SWMUs and Areas of Concern (AOCs) in a September 1991 submittal. EPA performed the RFA based upon that document. Detroit Coke has reviewed the original 1991 submittal with respect to a current understanding of the RCRA Corrective Action program. Detroit Coke believes that many of the units identified originally do not manage solid waste and should not have been included in the RFA. Since September 1991, when the facility was shut down, and continuing throughout the period that EPA performed the RFA and issued the draft permits, there has been an active environmental management program on-going at the facility. To date, approximately $1,150,000 has been expended to clean up the units originally identified. We have undertaken interim measures at most of these units and are confident that our interim measures, combined with clarifying certain information contained in the RFA, will allow EPA to modify the list of SWMUs. Provided in Attachment 1 to our comments is information regarding each unit, a description of interim measures (accomplished or planned), and the rationale for decision-making regarding whether the unit is a SWMU. Based upon that information, Figure 1 is a SWMU location plan for those SWMUs that we

believe should be investigated in the RCRA Corrective Action Program, including the following:

- SWMU 2, which we propose be redefined to include the former SWMU 14
- SWMU 3
- SWMU 5
- SWMU 6
- SWMU 19.

Edited Permit

The second document enclosed with this transmittal is a "marked-up" version of UIC Permit #MI-163-1W-0003; a combination of handwritten and typed comments are specifically noted in the margins or on attached pages. The information contained in the edited permit is identical to information contained in our comment package; the edited permit format is simply another presentation method for Detroit Coke's comments.

Detroit Coke trusts that these comments are reasonable and appropriate, given the dynamic nature of the RCRA Corrective Action Program and environmental activities at the site. We look forward to discussing these comments with EPA at the meeting currently scheduled for 10:30 a.m. on June 16, 1993 in EPA's offices. If you have any questions before then, please do not hesitate to contact me at the facility (313/842-6222).

Respectfully submitted,

Paul Choinski | SFM

Paul Choinski
Facility Manager
on behalf of Detroit Coke Corporation

PC:lem:16265

cc: Allen Melcer
Gregory A. Rudloff

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JER 05'28'93	APPROVED K.D.C. 5/28/93 DTM 5/28/93	93061-B1

16208

ZUG ISLAND ROAD

FENCE LINE

SWMU 19

PUMP HOUSE

SWMU 5

TANK #3

SWMU 6

SWMU 3

BY-PRODUCT AREA

EXHAUSTER BLDG.

COOLERS

PRE-HEAT BLDG.

MAIN OFFICE

STORAGE BLDG.

STORAGE/SHOP BUILDINGS

OFFICES

PUSHER AREA

BATTERY #4

COKE WHARF

COKE STORAGE

SWMU2

ROUGE RIVER

DETROIT RIVER

SCALE, FEET

0 80 160

FIGURE 1

SOLID WASTE MANAGEMENT UNIT (SWMU) LOCATION PLAN

DETROIT COKE CORPORATION
DETROIT, MICHIGAN

PREPARED FOR

DETROIT COKE CORPORATION
DETROIT, MICHIGAN

REMCOR